

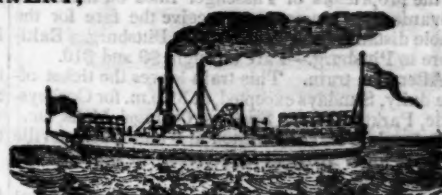
# AMERICAN RAILROAD JOURNAL,

## AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,

AND MINES.

ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 23 CHAMBERS STREET, NEW YORK, AT FIVE DOLLARS PER ANNUM.

SECOND QUARTO SERIES, VOL. II, No. 19;

SATURDAY, MAY 9, 1846.

[WHOLE No. 515, VOL. XIX.]

### BOSTON AND PROVIDENCE RAILROAD.

Passenger Notice. Summer Arrangement. On and after Monday, April 6, 1846, the Passenger Trains will run as follows:

For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m. Accommodation Trains, leave Boston at 7½ a.m. and 4 p.m., and Providence at 8 a.m. and 4½ p.m. Dedham trains, leave Boston at 8 a.m. 12½ m., 3½ p.m., and 6½ p.m. Leave Dedham at 7 a.m. and 9½ a.m. and 2½ and 5½ p.m. Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7-20 a.m. and 3½ p.m. All baggage at the risk of the owners thereof.

W. RAYMOND LEE, Supt.

**BRANCH RAILROAD AND STAGES CONNECTING** with the Boston and Providence Railroad. Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I.—Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

### NORWICH AND WORCESTER RAILROAD.

Summer Arrangement, commencing Monday, April 6, 1846. Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4½ p.m. Leave Worcester, at 10 a.m., and 4½ p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1½ p.m. train from Boston.

New York Train via Long Island Railroad: Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4½ p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Less when paid for Tickets than when paid in the Cars.

J. W. STOWELL, Supt.

### BOSTON AND MAINE RAILROAD.

Upper Route, Boston to Portland via, Reading, Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Summer Arrangement, 1846.

On and after April 13, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows: Boston for Portland at 7½ a.m. and 2½ p.m. Boston for Great Falls at 7½ a.m., 2½ and 4½ p.m. Boston for Haverhill at 7½ and 11½ a.m., 2½, 4½ and 6 p.m.

Boston for Reading at 7½, 9, and 11½ a.m., 2½, 4½, 6 and 8 p.m.

Portland for Boston at 7½ a.m., and 3 p.m.

Great Falls for Boston at 6½ and 9½ a.m., and 4½ p.m.

Haverhill for Boston at 6½, 8½, and 11 a.m., and 4 and 6½ p.m.

Reading for Boston at 6½, 7½ and 9½ a.m., 12 m., 1½, 5 and 7½ p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

CHAS. MINOT, Super't.

### GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTICALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and the Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenanla River, in Cass Co., Georgia.

Rates of Freight, and Passage from Augusta to Oothcaloga.

On Boxes of Hats, Bonnets, and Furniture

per foot.....16 cts.

" Dry goods, shoes, saddlery, drugs, etc., per 100 lbs.....95 "

" Sugar, coffee, iron, hardware, etc.....65 "

" Flour, bacon, mill machinery, grindstones, etc.....33½ "

" Molasses, per hoghead \$9-50; salt per bus.20 "

" Ploughs and cornshellers, each.....75 "

Passengers \$10-50; children under 12 years of age half price.

Passengers to Atlanta, head of Ga. Railroad, \$7.

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,

Ch. Eng. and Gen. Agent.

Augusta, Oct. 21 1845.

44 1y

### SUMMER ARRANGEMENT.—NEW YORK AND ERIE RAILROAD LINE, from April 1st until further notice, will run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

FOR PASSENGERS—

Leave New York at 7 A. M. and 4 P. M. Middletown at 6½ A. M. and 5½ P. M.

FARE REDUCED to \$1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

FOR FREIGHT—

Leave New York at 5 P. M. Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P. M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts.

H. C. SEYMOUR, Supt.

March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board.

### BALTIMORE AND OHIO RAILROAD.

MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7½ and

Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh.

Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points \$7, and 4 cents per mile for less distances. Fare through to Wheeling \$11 and time about 36 hours, to Pittsburgh \$10, and time about 32 hours. Through tickets from Philadelphia to Wheeling \$13, to Pittsburgh \$12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH. Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances.

**BALTIMORE AND SUSQUEHANNA**  
Railroad. The Passenger train runs daily except Sunday, as follows:

Leaves Baltimore at 9 a. m., and arrives at 6 p. m. Arrives at York at 12 p. m., and leaves for Columbia at 1 p. m. Leaves Columbia at 2 p. m., and leaves York for Baltimore at 3 p. m. Fare to York \$2. Wrightsville \$2 50, and Columbia \$2 62. The train connects at York with stages for Harrisburg, Gettysburg, Chambersburg, Pittsburg and York Springs.

Fare to Pittsburg. The company is authorized by the proprietors of Passenger lines on the Pennsylvania improvements, to receive the fare for the whole distance from Baltimore to Pittsburg. Baltimore to Pittsburg.—Fare through, \$9 and \$10.

Afternoon train. This train leaves the ticket office daily, Sundays excepted, at 3 p. m. for Cockeysville, Parkton, Green Springs, Owings' Mills, etc.

Returning, leaves Parkton at 6 and Cockeysville and Owings' Mills at 7, arriving in Baltimore at 9 o'clock a. m.

Tickets for the round trip to and from any point can be procured from the agents at the ticket offices or from the conductors in the cars. The fare when tickets are thus procured, will be 25 per cent. less, and the tickets will be good for the same and following day any passenger train.

D. C. H. BORDLEY, Sup't.

31 1y Ticket Office, 63 North st.

**CENTRAL RAILROAD-FROM SAVANNAH**  
to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight.

Rates of Passage, \$8 00. Freight—

On weight goods generally... 50 cts. per hundred.

On measurement goods... 13 cts. per cubic ft.

On brls. wet (except molasses and oil).....\$1 50 per barrel.

On brls. dry (except lime)... 80 cts. per barrel.

On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred.

On hhd. and pipes of liquor, not over 120 gallons.....\$5 00 per hhd.

On molasses and oil.....\$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission.

THOMAS PURSE,

40 Gen'l. Sup't. Transportation.

**LITTLE MIAMI RAILROAD.—1846.—**  
Summer Arrangement.

Two passenger trains daily.

On and after Tuesday, May 5th,

until further notice, two passenger trains will be

run—leaving Cincinnati daily (Sundays excepted)

at 9 a. m. and 1 p. m. Returning, will leave Xenia

at 5 o'clock 50 min. a. m., and 2 o'clock 40 min. p. m.

On Sundays, but one train will be run—leaving

Cincinnati at 9, and Xenia at 5 50 min. a. m.

Both trains connect with Neil, Moore & Co.'s

daily line of stages to Columbus, Zanesville, Wheel-

ing, Cleveland, Sandusky City and Springfield.

Tickets may be procured at the depot on East

Front street.

The company will not be responsible for baggage

beyond fifty dollars in value, unless the same is re-

turned to the conductor or agent, and freight paid at

the rate of a passage for every \$500 in value above

that amount.

W. H. CLEMENT,

Superintendent.

**TROY AND GREENBUSH RAILROAD.**  
Spring Arrangement. Trains will be run on

this Road as follows, until

further notice, Sundays ex-

cepted.

Leave Troy at 6 1/2 A.M. Leave Albany at 7 A.M.

" " 7 1/2 " " " 8 " "

" " 8 1/2 " " " 9 " "

" " 9 1/2 " " " 10 " "

" " 10 1/2 " " " 11 " "

" " 11 1/2 " " " 12 M.

" " 1 P.M. " " 1 1/2 P.M.

" " 2 " " " 2 1/2 " "

" " 3 " " " 3 1/2 " "

" " 4 " " " 4 1/2 " "

" " 5 " " " 5 1/2 " "

" " 5 1/2 " " " 6 " "

" " 6 1/2 " " " 7 " "

The 6 1/2 a.m. and 2 o'clock p.m. runs from

Troy, to Boston runs.

The 12 m. and 6 o'clock p.m. trains from Boston

runs.

Passengers from Albany will leave in the

Boston Ferry Boat at the foot of Maiden Lane,

which starts promptly at the time above advertised.

Passengers will be taken and left at the principal

Hotels in River Street, in Troy, and at the Nail

Works and Bath Ferry.

L. R. SARGENT,

Superintendent.

14 1y

**RAILROAD IRON.—THE "MONTGOMERY"**  
Iron Company, Danville, Pa., is prepared

to execute orders for the heavy Rail Bars of any

pattern now in use, in this country or in Europe,

and equal in every respect in point of quality. Ap-

ply to MURDOCK, LEAVITT & CO.,

Agents.

Corner of Cedar and Greenwich Sts.

45 1y

**FLAT BAR, ENGLISH ROLLED, RAIL-**  
road iron, 2 1/2 x 1—a large part suitable to

relay. For sale by

C. J. F. BINNEY,

Commission Merchant, 1 City Wharf,

Boston, Mass.

11 1m

**THE SUBSCRIBERS, AGENTS FOR**  
the sale of

Codorus,

Glendon,

Spring Mill and

Valley,

Pig Iron.

Have now a supply, and respectfully solicit the

patronage of persons engaged in the making of Ma-

chinery, for which purpose the above makes of

Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebra-

ted Fire Bricks and prepared Kaolin or Fire Clay,

orders for which are promptly supplied.

SAM'L KIMBER, & CO.,

59 North Wharves,

Philadelphia, Pa.

Jan. 14, 1846. [174]



**CUSHMAN'S COMPOUND IRON RAILS.**

**C**USHMAN'S COMPOUND IRON RAILS.  
 Etc. The Subscriber having made important improvements in the construction of rails, mode of guarding against accidents from insecure joints, etc.

—respectfully offers to dispose of Company, State Rights, etc., under the privileges of *letters patent* to Railroad Companies, Iron Founders, and others interested in the works to which the same relate. Companies reconstructing their tracks now have an opportunity of *improving* their roads on terms very advantageous to the varied interests connected v. u. their construction and operation; roads having in use flat bar rails are particularly interested, as such are permanently available by the plan.

W. Mc. C. CUSHMAN, *Civil Engineer,*  
Albany, N. Y.

Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applications must be post paid.

**TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.**

**WELDED WROUGHT IRON TUBES**

**G**REAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days* from Baltimore.

Fare from Baltimore to Charleston.....	\$21 00
" " " Richmond.....	6 60

For Tickets, or further information, apply at the  
Southern Ticket Office, adjoining the Washington  
Railroad Office, Pratt street, Baltimore, to  
**STOCTON & FALLS, Agents.**

GEORGE VAIL & CO., SPEEDWELL IRON

**G Works, Morris'town, Morris Co., N. J.**—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1½ in. to 2½ in thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wro't. Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wro't. Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions.

## NICOLL'S PATENT SAFETY SWITCH

**N** for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

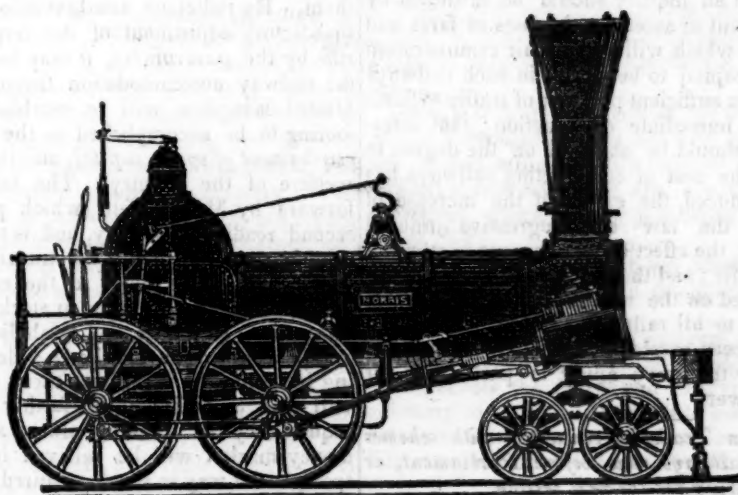
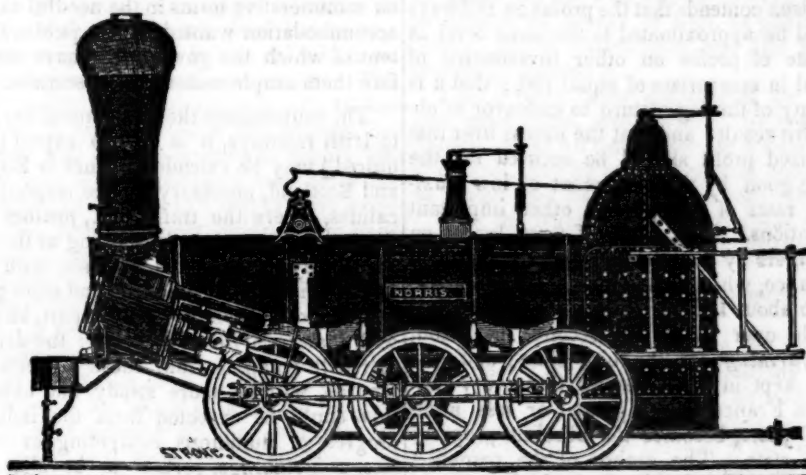
It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee.  
G. A. NICOLLS,  
Reading, Pa.

**RAILROAD IRON WANTED. WAN-**

**R**ted, 50 tons of Light Flat Bar Railroad Iron. The advertisers would prefer second-hand iron, if not too much worn. Address Box 384 Philadelphia P. O.—Post paid. 8 46



**M**ANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz :

Class	1,	15 inches	Diameter of	Cylinder,	×	20 inches	Stroke.
"	2,	14	"	"	×	24	"
"	3,	14 $\frac{1}{2}$	"	"	×	20	"
"	4,	12 $\frac{1}{2}$	"	"	×	20	"
"	5,	11 $\frac{1}{2}$	"	"	×	20	"
"	6,	10 $\frac{1}{2}$	"	"	×	18	"

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.  
Castings of all kinds made to order: and they call attention to their Chilled Wheels  
or the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

**"Low Fares make Large Receipts."**

Such is becoming the prevailing opinion, we believe, except with a few of those who have the management of railroads; and we are quite satisfied that it is rapidly gaining ground.

The following remarks on this subject are from the London Morning Chronicle, and may be profitably read by those who manage our important lines emanating from the large cities, and especially by those which connect two large cities.

Such of the leading railway companies as have tried the experiment of low fares have found their receipts increased. The Brighton, the London and Birmingham, and the Great Western companies have all reduced their fares for passengers (and partly, we believe, also their charges for goods), and the result has been that they have drawn more money in a given period after these alterations were made, than they had done in the same period of time before they came into operation. The reductions carried out by these companies, have, however, been only timidly applied. They have not gone nearly to the proper extent to afford the principle fair play. So long as the matter is left to the voluntary operation of the different boards of direction, the fares will be maintained at too high a rate. They will be partially reduced only from a fear of rivalry, and merely to the extent necessary to protect them from the fear of immediate competition. The old railway companies possess a monopoly of transit, which they have every desire to uphold; and by means of buying up and amalgamations they threaten to extend their empire over every other part of the island. The spirit of the age is, nevertheless, in hostility to this enlargement of their power, and is not unlikely to make them feel its force. In a pamphlet recently published, from the pen of Mr. Morrison, M. P., there is a passage at the 13th page, which tells them in very explicit terms that they must set their house in order, and accommodate their tariffs to the new order of things. "If," says Mr. Morrison, "the shareholders of the London and Birmingham, the Great Western, and other railway lines believe that they are to be permitted to flourish at the expense of the public, by means of that *protection* which is hunted down on all sides, I apprehend they will experience a disappointment. The monopoly of the landowner is not to be suppressed to make way for the monopoly of railway speculators. The latter must accommodate themselves to the new order of things. The proprietors of an old line of railway are in the position of a manufacturer, who, having constructed machinery upon an old and expensive plan, finds it superseded by more economical or powerful machinery; but were such a man to attempt to obtain a higher price for his work than would remunerate those who work with the improved machinery, and asked parliament to assist him in doing this, should we not consider him as fitter for bedlam than for the exchange?" The old trunk lines were made at much useless cost; no one disputes that fact; and it is notorious that the lines now before parliament will be made at much less expense, notwithstanding the higher price of labor and materials. The large re-

turns drawn by the established companies have enabled the directors to return high rates of dividend to their shareholders; and the promoters of the new companies naturally expect to reap profits equally great by participating in the same high rates of fares for passengers and goods. These expectations of inordinate returns for capital embarked have been the great instigators of the late speculative mania; and Mr. Morrison is of opinion that the only remedy which seems likely to check its continuance or return, to an extent which must be dangerous to other branches of trade and commerce, by withdrawing from those channels the amount of capital necessary for their support, is the establishment "of a system of low fares—that is, of fares very much lower than those now charged on most of our railways." Mr. Morrison contends that the profits on railways should be approximated to the same level as the rate of profits on other investments of capital in enterprises of equal risk; that it is the duty of the legislature to endeavor to obtain this result; and that the excess over that equalized profit should be secured for the public good by the enactment of low maximum rates of charge and other important stipulations. The rates of fares levied on passengers by the Great Northern company of France, which is a model line, are equivalent to about 1½d. for the first class per mile; a little over 1d. for the second; and about three farthings for the third class; and it is to be kept in view, besides, that every railway in France, after a greater or less number of years, becomes the absolute property of the state. The author of the pamphlet before us concludes his remarks by suggesting that an inquiry should be instituted by parliament to ascertain the rates of fares and charges which will yield a fair remuneration for the capital to be vested in such railways as offer a sufficient prospect of traffic to justify their immediate construction; that information should be obtained on the degree to which the cost of constructing railways has been reduced, the extent of the increase of traffic, the law of progressive annual increase, the effect of low charges in stimulating traffic; and that a common tariff should be framed on the results of this inquiry applicable to all railways for which acts have not yet been passed, and also to every existing railway that may apply to parliament for new powers.

**The Iron Trade, as connected with schemes for railways now before Parliament, or preparing for the next session.**

SIR,—The check to the upward tendency of iron, from political and other circumstances connected with the money market, being, as may be expected, of a temporary character, the considerations that bear upon iron will, ere long, be restricted to those that legitimately belong to it, and, with reference to railway undertakings, the correct inference seems to be, the prospect of a healthy and prosperous period, for the iron trade is gaining strength from the cessation in transactions in railway scrip, and the desire of all parties, concerned in the numerous schemes now before, or pre-

paring to go to, Parliament, to see them restricted to the capital the country can control for railway enterprise. The lines to be made in Ireland with the co-operation of the government, and the legislative measures likely to follow the report of Mr. Morrison's committee, together with the strength needful lines will gain from the amalgamations that may result through the committee, likewise appointed for that purpose, on the motion of Mr. W. Patten, foretell the advancement of well-directed undertakings, and the release of much capital, at present locked up in competing, or other useless, schemes. Part of this capital that will in course become released will, doubtless, afterwards be embarked (where it belongs to parties that do not otherwise require it,) with other "bona fide" capital in the country, ready for employment on remunerative terms in the needful railway accommodation wanted by the public, the extent of which the government have now before them ample materials to ascertain.

The countenance the government has given to Irish railways, it is fair to expect (if required,) may be extended to lines in England and Scotland, necessary for the respective localities, where the traffic, etc., justifies their formation; consequently, looking at the needed railways to be made at home, with those also required in the colonies, and other places abroad, to be wholly, or in part, supplied with materials from England; the demand, that will emanate from these undertakings for iron, will be more steady and extensive than could be expected from the indiscreet progress of numerous competing, or worthless, undertakings, certain to be abandoned before a ton of iron could be required for them. By judicious amalgamations, and a satisfactory adjustment of the respective tariffs by the government, it may be expected the railway accommodation throughout the United Kingdom will be established on a footing to be accomplished to the profitable employment of spare capital, and the general welfare of the country. The bill brought forward by Mr. Moffatt (which passed the second reading yesterday, and is to be committed to-day,) to permit the transfer of railway deposits to be made to the accountant-general in exchequer bills, in stock, or other government securities, and to abolish the necessity of having a speaker's order for paying in money, or depositing these securities, will tend to facilitate the further payments required by the standing orders, so that the money market will be relieved in this respect, in the way so much required when the first deposits were made.

The release of a large amount of these deposits may be hastened by the petitions now going to Parliament for the abandonment of many of these schemes; so that the good being separated from the bad, and the attention of parties capable of carrying them out being directed only to the former, the iron trade will feel this influence; and, looking at the demand actually in operation at this time, and the accession to it for iron, to construct only a very limited portion of the really requisite railways, an improvement, to correspond with



the prices at this period last year, is a moderate estimate for the future, as the trade again assumes the buoyancy an easier state of the money market will not fail to impart to it. In this month, last year, the rates were nominally 11*l.* 10*s.* to 12*l.* for rails; 6*l.* 10*s.* No. 1; 6*l.* 5*s.* No. 2; and 6*l.* No. 3, Welsh foundry pig; and 5*l.* 5*s.* for Scotch pig. To this point the market was reinstated for rails in October last, when the causes that have deranged every branch of trade, reduced the prices of iron; but this reduction is not for the foregoing reasons to be considered otherwise than temporary.—MERCATOR: London, April 1.

**Galvanized Iron.**—The proceedings at the meeting of the Patent Galvanized Iron Company, held on Tuesday last, affords one of those striking evidences of the improvement, and the prospective advantages attendant on the iron trade; while, we need hardly say, that this staple product is one on which we mainly depend as our national wealth. The report read tells us, that not only will 10 furnaces be in blast within a few months, but that they will be in a position to supply 700 to 800 tons of manufactured iron from the Phoenix and Corby's-hall works; and moreover, that, at this moment, orders are in hand which will occupy two to three years in their completion. This is at least satisfactory to the shareholders, who, with a regular dividend of 8 per cent., we think, may well content themselves with their position. The adjunct of the works in Staffordshire, and the association of Mr. W. MATHEWS, the late proprietor, as a director of the company, we need hardly say, is no slight advantage acquired.

**Construction of Locomotive Engines in France.**—In former numbers of this Journal, we have stated, that in consequence of the numerous concessions that have been made of the principal railways throughout France to opulent companies, it has given the greatest impetus to the constructing of machinery, and the development of mining industry. The proprietors of railways in France are trying all they can to make their own engines, and all the material requisite for the lines to be laid down—so as to form a monopoly among themselves, to prevent the introduction of the English locomotives, rails, etc. This has had its effect to a very great extent, and there a most remarkable activity now prevails in all the iron works, forges, and high furnaces, and the factories for the constructing of machinery, to compete with each other, so as to furnish the requisite materials for railways—viz., iron for rails, cast iron for chairs and sleepers, and everything required for the making of steam-engines, so that they should be entirely confined to their own factories. The *Journal des Chemins de Fer* has taken up the subject with some spirit, and shows the injury it will do to the progress of mining and mechanical industry, if the proprietors of railways are determined, not only to make their own engines, but everything belonging to the railway department, by establishing their own workshops, which will be highly inju-

rious to private enterprise,—as the companies being composed generally of wealthy bankers, and the most opulent leading men, are forming a conclave to purchase not only the coal, but the great productive iron mines in France and Belgium, so as to work them themselves at a trifling cost, considering the facilities they will have over all other competition, having the means of conveyance in their hands.

#### Railway Through Hudson Street and the Eighth Avenue.

"The special committee of the board of assistants," says the Journal of Commerce, "to whom was referred the subject of the Hudson street railway, assign in their report the following reasons as influencing them to recommend the construction of the work."

That a railway from the extreme point of the island, on the west side of the city, must be constructed sooner or later, as public necessity, public convenience and the public prosperity demand it.

That it were better constructed by a private association, over whom the common council can at all times exercise a supervisory control, than by an incorporated company, on whom they could place no restrictions.

That the wants of the western side of the city and island demand the immediate construction of such a road.

That the route proposed is the most convenient and appropriate.

That it will greatly enhance the value of the property in that section, belonging to the city, and which is now wholly unproductive.

That it will lead to great improvements, and will call forth a large amount of idle capital, to be employed in the erection of stores, dwellings, etc.

That it will greatly increase the taxable resources of the city, and eventually afford means of meeting a large portion of the city debt.

That it will afford facilities for travel urgently demanded by, but not now offered to our citizens, and at greatly reduced rates.

That it will not create any obstruction in the street, which can be just cause of complaint.

That it will not impair the interests even of the present monopoly of omnibus lines on that route.

That it will, in a great measure, prevent the emigration of our citizens to neighboring towns, across the North and East rivers, by affording to them inducements to select salubrious and convenient residences on this island, at reasonable rents, and by affording to them the means of going to and from their places of business, with regularity, convenience and dispatch.

And finally, that it will greatly increase the comfort, welfare, happiness and prosperity of all the laboring classes.

"Appended to the report is an ordinance to carry it into effect, and providing for the regulation, etc., of the railway when constructed, there being one provision that if the Erie railroad shall, at any time, be continued as low as MacComb's dam, the rails shall be extended to the same width as that road. The

road from the southern terminus at Duane street to 24th street, is to be completed in 8 months from the 1st of June next."

We have not been inattentive observers of this enterprise, though it has not been a subject of remark in the Journal. The convenience and importance of a well regulated railway conveyance on the west side of the city has long been apparent to us; and we are gratified to learn that a few enterprising gentlemen are moving in the matter, and also that the common council look upon the measure in a favorable light, and are disposed to sanction its construction.

In a city situated like New York, upon a narrow strip of land, surrounded by water, at least on three sides, where the principal business is crowded into one corner, the great mass of the population must reside at a considerable distance from their place of business; and must, as a matter of course, have an easy, cheap and expeditious mode of getting to and from their dwellings. And there is no mode of accomplishing that object so readily, and so cheaply as by railroad; nor is there any mode of transporting a large number of people through a city, with as little liability to accident, as by a well constructed and well managed railroad. They cause less obstruction to pedestrians, to carriages, and to business, than omnibuses. They are also much less destructive to the pavements, and less annoying to the residents of the streets through which they pass. In short, they accommodate and benefit many—and especially those who most need accommodation—those who can least afford to pay for riding—yet who need to ride often—the laborer—the mechanic—and those of small means. They will enable such to go so far out as to obtain lots cheap and build snug dwellings, and enjoy fresh air, yet be able to get to and from their business at a seasonable hour. Then why should any one object to the construction of a railroad in the city.

#### Railroads in Kentucky.

We find the following remarks on the subject of railroads in the Louisville Democrat.—It shows that the right spirit is moving in that region as well as in Tennessee and Ohio, Indiana and many other places we might name. We are gratified with it and shall look to the people of Kentucky for a railroad from Louisville via Frankfort and Lexington to the mouth of Guyandotte in Virginia, and another to Nashville, Tenn.

**Railroads.**—These improvements become more and more popular, the more they are tried. Their progress in England surpasses anything which could have been conceived some years ago. The late mania, on this subject, if mania it should be called, resulted from the increasing value of railroad stock. The expedition and safety of this mode of conveyance will cause it to supersede all others. It has been generally thought that the west is yet to sparsely settled and its resources too partially developed for railroad stock to be profitable. This idea seems plausible at first sight, but experience shows that it is a mistake. The roads which have been completed and put into operation give the highest encouragement for the prosecution of these improvements. The Madison and Indianapolis road promises to be an excellent investment, notwithstanding the croakings of the over cautious.

The railroads in the United States are generally in an unfinished state. Comparatively few of them have been completed to their natural terminus, still we know enough about them to satisfy us that we are in no danger of overestimating their ultimate value. The truth is, the resources of our soil, the industry and enterprise of our people are boundless, and wherever a railroad opens a communication from any business point into the heart of the country, business and trade spring up like magic.

We subjoin from the Railroad Journal an account of the dividends made on the stock invested in these improvements in this country, so far as they are reported. It must be recollected at the same time that many of these roads have cost enormously owing to the want of experience in constructing them, the inflation of currency and other causes.

The Portland and Portsmouth road in Maine, length 50 miles, dividend in 1844, 6 per cent.

The Concord road, N. H., length 35 miles, dividend 12 per cent.

The following roads with their length and dividends are located in Massachusetts ;

	Length.	Div.
Boston and Maine, - - -	56	6½
" " Lowell, - - -	26	8
" " Providence, - - -	41	6
" " Worcester, - - -	44	7½
Charlestown branch, - - -		5½
Eastern, - - -	54	8
Nashua and Lowell, - - -	14½	10
New Bedford and Taunton, - - -	26	6
Norwich and Worcester, - - -	66	3
Western, - - -	117	8
Housatonic, - - -	74	6

There are several other roads in that state, from which the reports are not given as they are yet unfinished. We have reports from only five in New York, viz:

	Length.	Div.
Auburn and Syracuse, - - -	26	6
Syracuse and Utica, - - -	56	8
Tonawanda, - - -	43	5
Troy and Saratoga, - - -	25	2½
Utica and Saratoga, - - -	78	8

In Virginia, the Richmond, Fredericksburg and Potomac road—length 76 miles, dividend 4 per cent. South Carolina railroad, 136 miles, dividend in 1844, 5 per cent., and we learn from the Commercial Review that the dividend last year was over 6 per cent.

It is to be regretted that the reports are so partial, and that the circumstances are not stated more minutely; but from Massachusetts the reports are fuller and most of her stock is much above par, only two or three below it, and these are but just in operation. This is sufficient to show what profit may be expected from this species of improvement, especially when we look at the extravagant cost of these roads, many of which swallowed up about \$20,000 per mile—10 or \$12,000 more than the fairly estimated cost of the contemplated road to Columbus.

Thus much of railroads in general. The interest of our city in this species of improvement, depends upon our connection, or upon what may be, our connection with the vast

system which is at no distant day to intersect the union in all directions, and connect the gulf of Mexico and the lakes, the northern and southern Atlantic coasts, with those of the Pacific.

In 1830, South Carolina began to cast her eyes toward the valley of the Mississippi.—An effort was made to reach the Ohio, which failed at that time in some respects, yet the work was commenced, and the railroad from Charleston is making rapid progress towards the west. It is making its way through Georgia and will soon be finished to Chattanooga on the Tennessee. A company is chartered to bring it 130 miles further, to Nashville. It will send its branches to Virginia, to Alabama, to Louisiana, and it will reach the Ohio at some point; and thence a connection will be formed to the lakes. Let a road be sent out from Louisville to Columbus and thence to lake Michigan, and there will be every inducement for those south of us to aid in bringing the Southern railroad from Nashville to Louisville. We shall then be in the great highway from the south Atlantic coast to the lakes, where we shall meet these same improvements pushing their way westward. So far there is nothing at all chimerical, nothing which will not be accomplished at no distant day. This great Southern road is making its way to the Ohio and Mississippi. It will reach both in less than ten years. It only requires that enterprise and public spirit which others will exercise if we do not, to place ourselves on this great highway.

We have heard it suggested that this route will benefit other places more than Louisville even if we are on the route; but what will become of Louisville, if the whole trade of the southeast, is carried to some other point without touching us.

We need not urge the probability of a branch from Louisville through Lexington to some point in Virginia, and thence to be connected with the northeast, nor need we take into the account Whitney's project of a railroad from the southern point of lake Michigan to the Pacific coast at the mouth of the Columbia.

The present generation may see the completion of all these projects, and see nothing more marvelous than what has occurred in the last thirty years.

It will be seen that the railroad to Columbus is only a part of a vast chain. Its value cannot be estimated by the trade it will command within the limits of Indiana. This trade, there is ample reason to believe will fully justify the investment of the funds necessary to the completion of the road, as far as contemplated. The connection which it may form with a system of incalculable magnitude, will render it a safe investment for an indefinite period of time. There is no other improvement, which, with a tolerable share of enterprise can divert the business from it at some future time and render it unprofitable, which might be the case if it did not form a natural link in the great chain of roads now in contemplation.

#### The Rome Branch Railroad,

The Coosa River Journal, of the 18th inst., says the Savannah Republican, states that Messrs. D. R. Mitchell, Edward Ware, John Smith and Joseph Waters, the gentlemen named in the charter granted by the legislature of Georgia, for the construction of a railroad from Rome to Kingston, met in Rome, Ga., on the 12th inst., for the purpose of adopting preliminary measures for the organization of the company, and the construction of the road. At this meeting, the corporators appointed agents to receive subscriptions of stock at Rome, Summerville and Van Wert, in Georgia, and in Cherokee and Benton counties, in Alabama. We are glad to find, says the Journal, so much zeal and earnestness exhibited for the construction of a road which cannot fail to produce such immense advantages and benefits to the whole state, and to Floyd county in particular. Let the citizens respond to the call of the corporators, and before many months elapse, there will be a continuous line of railroads from the Coosa to Savannah and Charleston.

The same paper, in a subsequent article, adds: "We are gratified to state to the public, that our prospects on this subject grow brighter every day, and the citizens of Floyd have nothing to do but to do their duty. Already, we understand, a considerable amount has been subscribed, and we trust that those who have the means, and are so vitally interested in the matter, will come forward immediately, and subscribe such amount as their means will warrant."

#### Norris' Locomotives in Austria.

A late letter from Vienna, says that there are 22 of Norris' locomotive engines finished and ready to be put on new lines of railroad in Austria. On the four roads extending from Berlin to Frankfort, Potsdam, etc., there are said to be 26 of these engines in operation.

We find this paragraph in the Journal of Commerce. We have long been aware that Messrs. Norris were shipping engines to Austria. We have frequently seen them on their travels through this city, and should be exceedingly gratified to witness their labors on the roads for which they were destined.

Mr. Wm. Norris is, we understand, engaged in the manufacture in Vienna, while the establishment in Philadelphia is carried on by Mr. O. A. Norris & Brothers.

"It is stated," says the N. H. Patriot, "that the Vermont Central railroad will not connect with the Cheshire, and that it is settled that the Central and Northern, (Lebanon,) railroads will form a connection at the mouth of White river."

This may be correct, but we have not a doubt but that the Central Vermont road will connect with both the Cheshire and the Lebanon or Northern roads; and travellers will be at liberty, as they should be, to take either route. The greater freedom of intercourse between the different railroads the better for all parties. All the railroads from the Atlantic ports of New England, in a westerly or northwesterly direction, will be connected by a continuous railroad from Hartford up the Connecticut valley to Canada line. The following paragraph from the "Bradford (Vt.) Protector," shows that operations on another



part of this line have been recently commenced. The whole line will be completed and connected within a few years, thus forming a net work of railroads, uniting all the New England states, and connecting them also with New York and Canada.

**"Our Railroad."**—We learn that Messrs. Fairbanks, Low, Gilmore and Weld, have been appointed a committee to go forward and build the road. The subscriptions are now ample to build forty miles or more of it. The engineer a Mr. Fox from Pennsylvania, is now upon the ground. He commenced his survey on Monday last. As soon as the location can be made, that portion between Oxford bridge and Wells river will be put under contract.

#### The Cambria.

We regret to record the misfortune of this noble ship. It is not necessary however, for us to give the details of her disaster, as they will be known to all our readers, through other channels, before the Journal will reach them. We therefore only give a few extracts from the Mining Journal, received by her, our other files not having come to hand. Our dates are to the 18th of April, and show a tendency to lower rates in the price of iron, as below.

#### The Iron Trade.

Our quotations by the Great Western were to the 3d of April, and were—

For rails.....£10 10s a £10 15s. per ton.  
we now give those of the 10th.....£10 10s. "  
and those of the 17th.....£10 5s. "

There is evidently a disposition in purchasers to bring down prices, while the manufacturers and holders, are exerting themselves to keep them up.—The course of parliament in relation to railways, and the somewhat unsettled condition of the relations between England and this country, will depress this branch of industry for a time—and it may be no disadvantage to those now in the manufacture, as it may deter others from engaging in the business—but we are fully of the opinion that parliament will, after all their sifting and rejections, authorize as many miles of railway this year as they did last year, viz: 3841 miles; and also that the Oregon war clouds will give place to the clear sky, and bright sunshine, of peace; which will insure a rapid extension of railways and vast consumption of iron, and as a matter of course, keep it at a high figure.

The following extracts from the Mining Journal of the 11th and 18th April, will give an idea of the general feeling among those extensively engaged in the business, at those dates.

"Iron of all descriptions remains much depressed, and very little doing since last week's Mining Journal. Scotch pig, for prompt payment, has been sold at 65s."

**"The Iron Trade."**—[From the Birmingham Journal of April 9.]—The quarterly meetings of the ironmasters of South Staffordshire commenced at Wolverhampton on Wednesday, and will be brought to a close this evening at Dudley. More than ordinary interest has been directed to the present meetings, owing to the precarious position of the trade for some months past, and the apprehension very generally entertained that the masters would be compelled to reduce prices. The opinion which we were led to express a fortnight ago, that there were no real grounds to justify a reduction, appears to be well founded, the manufacturers having, at their meeting in Birmingham, on Thursday, resolved to maintain the existing rates, and rather than yield on this point to reduce the make of iron—a course which has frequently been resorted to under similar circumstances. In fact, masters can scarcely be said to have any alternative, owing to the high price of materials, and the difficulties which would attend

attempts to reduce wages. The Shropshire masters, who supply this district with large quantities of iron, almost indispensable to our manufacturers, and who, it is well known, exercise much prudence and foresight in their movements, were unanimous in their determination to keep up the price of pigs at £5 10s., at which figure all their sales on Thursday were effected. It remains to be seen, by the result of this day's meeting at Dudley, whether the South Staffordshire masters will confirm the agreement, which it is generally understood would be acted upon during the ensuing quarter. Although many large firms have been shaken by the operations of speculators on the one hand, and the pressure on the money market arising from the uncertainty as to the measures of government on the other, still it is a most gratifying evidence of the stability and resources of the trade, that while commerce has been all but paralyzed, the demand for iron has enabled our manufacturers to maintain their position, and, with one or two exceptions, to meet their engagements."

**"Glasgow Iron Trade."**—April 3.—The market has not varied much for the last few days. A decline was anticipated in this market, owing chiefly to the unfortunate position of some dealers; it appears, however, they do not hold any stock. The shipments last week were upwards of 9000 tons, which exceeds the production. We understand there are many others unexecuted, as vessels cannot be had at present. Sales have been made at 65s., but 67s. to 68s. cash, is the price for choice of numbers.—*National Advertiser.*

Scotch pig was quoted on the 17th at £3 2s. 6d., and Welsh cold blast pig at £4 10s. to £5 5s.

A correspondent of the Mining Journal says that—

"Iron of all descriptions is somewhat easier this week, and business has been limited—buyers holding back for further decline. Scotch pigs are very depressed; sellers at 62s. 6d.—buyers at 60s. In foreign, nothing new."

**"The Iron Trade."**—The ironmasters held the last of their district quarterly meetings on Saturday last, at the Swan hotel, Dudley; and, so far as the expressed determination of the large proprietors not to reduce the prices can be taken as a standard for the ensuing quarter, the quotations of the Birmingham meeting may be considered permanent. Nothing, however, but absolute necessity will induce some very large buyers to pay the present demand. Some gentlemen have withheld their orders, on the ground that the prices are such as to render it impossible for them to meet competition. On the other hand, the ironmasters say they cannot reduce; that, during the last two years, men's wages have been increased to a great extent, and that any attempt to reduce them now would only be attended with inconvenience and injury, without any actual necessity for it. It is also confidently expected, that the arrangements of the government with respect to the proposed new railway bills will have a most beneficial effect, by cutting off all doubtful and unnecessary speculations, and facilitating the progress of those lines in this district which are held to be indispensably necessary, and for which large quantities of iron will be required."

**"Glasgow Pig Iron Trade."**—April 10.—No improvement can be quoted in this article—sales amongst speculators ranging from 62s. 6d. to 67s. 6d.—the former for low Nos., the latter for No. 1 quality. Makers seem firm at considerably higher quotations.—*National Advertiser.*

"April 14.—The price of Scotch pig iron, delivered here, may be quoted to-day at 65s. for all No. 1, and 62s. 6d. for all No. 3, per ton—net cash. At these rates, limited sales were made to-day. Market rather heavy, in consequence of the export orders falling off. Common bars, £9 10s.; railway bars, £10 10s.; railway chairs, £5 7s. 6d.—*Chronicle.*"

**Railroad Iron.**—The Danville Intelligencer says: "The Montour rolling mill, at this place, has for some time past been making over 200 tons of railroad iron per week. At one turn, last week, the night set of hands made 182 rails within the twelve hours. They made a hundred rails in six hours, having that number finished at midnight."

**Suspension Aqueduct.**—The strength of the Suspension aqueduct, says the Pittsburg Gazette, was fully tested on Monday afternoon. We noticed no less than six line boats, heavily laden, upon it at one time—one boat on each span. The quantity of water displaced by them was very large, and the motion communicated to it was of that kind to test the strength of the cables as severely as it is possible to do.

**Railroad from Raleigh to Columbia.**—We are glad to be able to state that this project, so important to the interests of the travelling public, not less than to those of the country upon the route, is not all lost sight of, but that it engages the earnest attention of those interested, here and elsewhere. It is believed that by the meeting of the next legislature, arrangements can be made to connect this enterprise with the purchase of the Raleigh and Gaston road from the state, and that, at the reduced price which the whole will cost, they can be made exceedingly valuable, and reasonably profitable. We think we may promise that the people of this town and country will do their part in furtherance of the work.—*Fayetteville Observer.*

**The Railroads.**—This being the finest season of the year, says the N. H. Courier, for working on the railroads, they are everywhere in full blast. Of the roads in this quarter we made mention in our last. The Keene Sentinel says that the Cheshire road experienced considerable difficulty in getting from the Massachusetts legislature a suitable connection with the Massachusetts' roads. On the Western road from Albany to Boston has lately been arranged an express train, running through by night, in about eight hours, at a fare of only \$3, (instead of 5.) It is quite successful. A new railroad has been proposed from Boston to New York, through Connecticut, which will be shorter than the Long Island, and will need no ferry.

**New Railroad Scheme in New Hampshire.**—We have supposed, says the N. H. Patriot, that no new route could be projected for chequering our state with railroads; but we were mistaken. The next legislature will be asked for a charter for a railroad from Connecticut river, through Claremont, Charlestown, Walpole, Westmoreland, Chesterfield and Hinsdale, to the Massachusetts line, with authority to use a portion of the Cheshire road.

**Railroad Iron.**—T. Belknap's N. H. Gazette says there are five railroad iron mills in this country—one in Massachusetts, one in Rhode Island, one in New Jersey, one in Pennsylvania, and one in Maryland. It is said these mills will work up a thousand tons of pig metal per week; and we say there will be five times that number in five years from this date.

**Troy and Greenbush Railroad.**—The number of passengers that passed over this road last week was within a trifle of 5,000 being more than an average of 800 per day.—*Jour. Com.*

**LACHINE CANAL.**—Official notice has been given by the Board of Works, that this canal will be opened on the 1st of May, instead of the 15th, as formerly advertised.

**North Branch Canal.**—The supervisor of this division of the Pennsylvania State works gives notice that navigation will be resumed on it on or before the 7th of May. Vast quantities of iron, coal and produce, are awaiting the opening of that channel, to be shipped to an eastern market.

**Extension Canal.**—This canal, says the Erie Gazette, is now in full tide of successful operation.—Heavy amounts of groceries, glass and glassware, and other Pittsburg manufactured articles, have been carried from Pittsburg to Erie, to be there transhipped to various points on the lakes. From the auspicious commencement, we should judge that a brisk trade will be carried on this season.

**Rates of Freight.**—The rates of freight, on the Connecticut river railroad, between Springfield and Northampton, were, we understand, reduced on the 13th inst. to \$1.25 per ton on first class freight, and \$1.00 per ton on second class.

**Crampton's Safety Locomotive Engine.**

At a meeting of the Society of Arts that took place last week, William Henry Bodkin, Esq., M. P., being in the chair, a very interesting paper on Mr. Crampton's patent locomotive was read. At this meeting were present many practical men, competent to enter into its merits, and the engine was very fully canvassed, and every point thoroughly investigated, more particularly by Mr. Gooch, superintendent of the locomotives on the Southampton railway, and by other competent judges present, and the engine received the unanimous approbation of the meeting. We have in a previous number, in 1843, given this engine a place in our columns, and think, after the investigation it underwent before so many competent judges, it gains increasing importance.

The advantages to be gained in this engine are, an increase of power and speed, combined with safety, or the concentration of all the existing advantages of the wide gauge or the narrow.

As to the question of attaining high speeds, we think they are desired by the public. The rapid increase lately of express trains, shows plainly the partiality in the public taste for rapid travelling, and the merchants of Liverpool have lately sent a petition to the Grand Junction railway company, requesting an additional express train, to enable them to leave Liverpool in the morning, spend five hours in London, and return to Liverpool the same evening.

It appears from the report of the gauge commissioners just published, that the speed of the narrow gauge trains, express and otherwise, does not equal that of the Great Western railway. We can see no reason why the present speed on the Great Western should be considered as a maximum; but even at the present rate adopted on the narrow gauge lines, it is clear that the limit of safety is approached. It is stated in the report just referred to, that only six accidents occurred from engines running off the line, from October, 1840, to May, 1845; whereas, there have been no less than seven within the last seven months, all attributable to excessive speed. From this it does not appear that the narrow gauge engines, with their present arrangements, are in a fit state to supply the public demand for still higher speeds.

It appears to us, therefore, that Mr. Crampton's engine is no less called for on the consideration of safety than of speed.

Mr. Crampton proposes to avoid two principal sources of danger—topheaviness, or height of centre of gravity, and overhanging weight, causing the oscillating motion, so pregnant with danger, as shown but too plainly by the recent accidents to the long-boiler engines.

The better to enable us to make the arrangement clear, we have struck off the same cut we gave in the previous number already referred to, and will quote the explanations of the different diagrams.

Fig. 1 represents an elevation, and fig. 2 a plan of the engine with the proposed alterations.

Fig. 1.



Fig. 2.

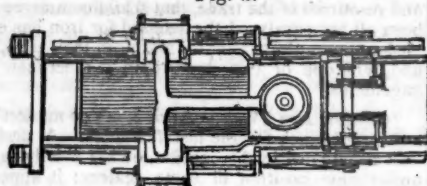


Fig. 3.



Fig. 4.

Fig. 5.

Fig. 6.

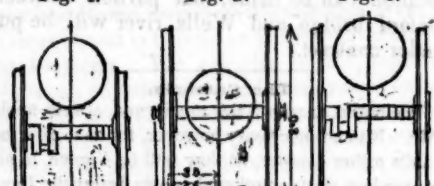


Fig. 3 is an elevation of the long-boiler engine, the merits of which have been fully discussed.

Fig. 4 shows the height of an ordinary six-foot wheeled engine.

Fig. 5 shows the height of Mr. Crampton's engine, with eight-foot driving wheels.

Fig. 6 shows the height of the ordinary description of engine, with eight-foot driving wheels.

The main point in the arrangement seems to be, placing the driving axle at the back of the fire box instead of underneath the cylindrical part of the boiler. The advantage of which is, the whole boiler can be very much lowered, and consequently the height of the centre of gravity reduced. The second advantage arising from this arrangement is, that the boiler is entirely within the points of support. These are two very important points—lowering the centre of gravity and bringing the whole weight between the supports, instead of having any portion overhanging. Between the driving and leading axles two sets of wheels are introduced, idle or otherwise. These are for the prevention of accident either from the fracture of the leading or trailing axle. In the case where the leading axle broke on the London and Birmingham railway in 1843, the engine turned over, and loss of life was the result. In similar accidents to six-wheeled engines, the smoke-box end has fallen, on account of the leading axle bearing more weight than the trailing. But with eight wheels, supposing the leading axle to break, the balancing point of the boiler would be within the base formed by the remaining six wheels. For it is evident that the part of the boiler overhanging the front small wheel could not overbalance the whole remaining boiler and engine. It may be remarked, one or both of these axles may be inserted or dispensed with, without at all interfering with the arrangements of the engine. As to the details of the machine, the cylinders are placed outside, fixed on to the boiler without any frame, and drive direct in the wheels. The valve gear is in the driving axle, and is boxed in, forming two seats for the convenience of the

enginemen, and thus the whole machinery is within the reach of the driver. As to the matters of detail, such as the capability of applying the most approved method of driving the slides, we do not ourselves enter into, but from the fierce of questions Mr. Crampton withstood on that head, at the meeting of the Society of Arts, from Mr. Gooch and many other practical men, we received the impression that no objection on that score could be maintained. The greatest amount of heating surface in the engines on the Great Western railway is between 700 and 800 square feet, and Mr. Crampton states that with his boiler lowered as has been described he can obtain 1,500 feet on the narrow gauge, without injuriously increasing the height of the centre of gravity.

In the evidence before the gauge commissioners, Mr. Daniel Gooch stated on behalf of the Great Western, that the angle of stability in the engines on that line was sufficiently large to be safe at any speed. Now, it was shown at the meeting before referred to, that the angle of stability in Mr. Crampton's engine with 8 feet driving wheels on the narrow gauge was, if not larger, at least as large as the angle of stability in the engines of the Great Western; or, in other words, the centre of gravity in Mr. Crampton's engine is as much lower than that of the Great Western, as the narrow gauge is less than the wide; and consequently as safe.

By inspecting the diagrams, the superiority of the position of the new engine over the ordinary plan is self-evident. It is not only lower and the weight confined between the axles, but any size wheel can be used without altering the height of the boiler, whereas wheels of 6 feet 6 inches diameter are considered the limit of size on the old plan.

Looking at the public demand for high speeds, and at the accidents that have occurred to fast trains, on the narrow gauge, as shown in the report of the gauge commissioners, looking at the increased liability to danger that will be incurred by larger engines capable of obtaining higher speeds, we cannot but regard this engine of Mr. Crampton's, concentrating as it does the power, sta-



bility, safety, and speed of the wide gauge—we cannot but consider this engine as highly important to the country, commercially and socially.

*Correspondents will oblige us by sending in their communications by Tuesday morning at latest.*

#### PRINCIPAL CONTENTS.

"Low fares make large receipts".....	292
The iron trade.....	292
Galvanized iron.....	293
Construction of locomotive engines in France.....	293
Railway through Hudson st. and the 8th avenue.....	293
Railroads in Kentucky.....	293
Norris' locomotives in Austria.....	294
Vermont Central railroad.....	294
The New York and Erie railroad.....	295
Crampton's safety locomotive engine (with cuts).....	296
"Le Chemin de Fer Belge".....	297
Philadelphia and Reading Railroad investigation.....	297
The outlet lock on the Delaware division.....	299
St. Lawrence and Atlantic railroad.....	300
Iron region of the west.....	300
Railroad receipts.....	300

#### AMERICAN RAILROAD JOURNAL.

PUBLISHED BY D. K. MINOR, 23 Chambers street, N.Y.

Saturday, May 9, 1846.

WANTED, the following numbers of the RAILROAD JOURNAL, to complete volumes, viz:

- No. 44 of volume four, for 1835;
- Nos. 44 and 45 of volume five, for 1836;
- No. 1 of volume six, for 1837;

Or the entire volumes of those years will be purchased at subscription price, if in good order; or the current volume will be cheerfully given in exchange for volume four or five, to any gentleman who prefers a new book to an old one; and we shall be very much obliged to those who will aid us in obtaining these numbers.

The numbers may be forwarded by mail, accompanied by a letter, stating when forwarded, and the volumes may be sent by express, or other safe conveyance, at our expense.

#### "Le Chemin de Fer Belge."

We have several times acknowledged the receipt of this journal, whose files are now regularly sent to us. Of the character of the journal itself we have as yet said nothing. We, however, purpose giving, as interesting to the railroad cause, a short notice of this, we believe, the only railroad journal of Belgium, the land of railways.

"Le Chemin de Fer Belge" is a spirited sheet, now in its fifth year—the size somewhat less than that of our Journal, but small when compared with the larger Belgium papers, which are jocularly styled "nos grands oncles, les journaux de la grand presse." This paper is, as well as our own, a weekly. It gives a summary of railway news, both domestic and foreign, well digested and pithy—an account of reports and official acts, which sometimes fill an entire sheet. Also a synopsis of improvements in the arts and sciences, having any relation to railroads or manufactures. In this latter department we find much that is interesting, and of which we shall from time to time give a notice for the benefit of our readers. There are also notices of matters of local affairs, theatres, new publications, etc.; and in a corner by itself, the editor weekly indulges in jokes upon matters and things, some of which seem to be very fair, although not susceptible of translation.

One striking peculiarity of the journal arises from the fact that the Belgian railways are under the immediate control and direction of the government.—Thus we find in one number the appointments for

the railway police for 1846-7—each officer is named—his station and duty. In another number, the regulations of the steam packets are to be found—the number of officers, and their duties in a series of regulations, 84 in number. Though totally differing from our railways in this respect, there are many things which may furnish useful hints for those on this side the Atlantic.

Our Belgian editor appears to have his own troubles, as well as others of the fraternity. It seems that the director of the state roads demands as a condition for subscribing to 200 numbers for the use of the state, that the proof of the journal shall be submitted to him before going to press, with the intention, the editor hints, of transforming said journal into a means of glorification for M. the director.

We hope our friend over the ocean will not allow himself to be disturbed by this very modest director, but that he may continue in his course with profit to others and profit to himself.

The Belgian papers are full of the proceedings relative to the destruction of the tunnel of Cumpitch—which is said to have been caused by an injudicious plan, and a fraudulent execution of the contract. A number of arrests have been made, one or more of the parties seem to be Englishmen. Bad work it seems cannot be easily covered up in Belgium. A Russian officer has been sent to Brussels to procure an engineer to aid in the construction of a very important line of railway.

In a discussion in the Belgian chamber of deputies upon the subject of parallel lines of canal and railway, the case of the Erie canal was cited, although without a due understanding of the circumstances of the case.

M. Vicat, so well known for his valuable researches in the nature of limes, mortars, and cements, has received a commandership of the legion of honor from the king of France.

#### Report of a Committee of Investigation into the Affairs of the Philadelphia and Reading Railroad Co.

The Philadelphia and Reading railroad has, from the very moment that operations were commenced upon it, excited an amount of attention, without a parallel in the history of railways in this country, and with the exception of the Liverpool and Manchester, we may say in any country. Nor is it difficult to assign good and sufficient causes for this notoriety. The road was intended to derive its revenue mainly from the transport of coal, the article best calculated to test the capability of railroads for the carrying of freight—it had to compete with a canal hitherto unrivalled in profitableness and facilities for its peculiar trade—it excited the highest hopes in the friends of railroads that it would prove incontestably the superiority of this mode of transport, as it was constructed with a grade entirely level, or descending in the direction of its trade.

These circumstances were alone sufficient to draw an unusual amount of attention to its operations—but others were soon added. The stock of the canal was injured in value by the prospective rivalry of the railroad, and as soon as the latter was opened, the business of the canal was largely diverted by the new channel. This led to a series of hostilities, continued with unremitting zeal, the object of which was the injury of the credit of the railroad, and the destruction of confidence in its capabilities. The railroad was unfortunately in a position to be influenced by such efforts, from the fact that, in compliance with the erroneous practice of our country, an insufficient capital had to be made good by loans. To meet the increased demand for the machinery of

the road, floating debts were incurred, which were continually falling due, and must either be met with new loans, or from the earnings of the road. In this way the machinery of the road was prevented from reaching the completeness so necessary for a traffic of gigantic nature. Most of the difficulties have been met successfully, by the indomitable energy of the managers of the road.

To meet the various charges which had been spread abroad by the opponents of the road, and to devise means for the improvement of its affairs—the stockholders and bondholders in New York and Boston appointed a committee of investigation, charged with a series of specifications, embracing all the charges against the road or its managers. The report now before us is the result of these investigations. One of the objects of the committee—the funding of a portion (\$1,100,000) of the floating debt having been accomplished (as will be seen by the annual report already published in the Journal, No. 11) the publication of this paper has been deferred to suit the convenience of the committee.

The members of this committee are gentlemen of the highest standing in the community, and well known for their intimate knowledge of the working of some of our best railroads—their opinions will therefore be entitled to a more than usual share of the public confidence. The impression produced by a perusal of their report is very favorable. The amount of labor required for the investigation, was enormous, and yet appears to have been faithfully performed. Moreover, we like the tenor of the paper, which is remarkably candid and independent, and totally different from that of "white washing."

We shall not trouble our readers with a detail of the specifications, but merely point out such portions as appear of interest in connection with their corresponding answers in the report.

Specifications I. and II. inquire into the accuracy of accounts of monies received and expended during the year ending Nov. 30, 1844. A careful examination of the books and vouchers proved that the monies had been correctly accounted for. To the question,

"Whether the sums of money so expended have been carried to the proper accounts, whether of transportation or construction."

We give the reply in full, as showing the candor of the committee in stating their opinion, and at the same time the small amount of change in the arrangement of the accounts required even by those who differ in opinion from the agents of the company, who have made out the accounts.

"In classifying expenditures, in all such cases, items will occur which stand on debatable ground, and in regard to which a difference of opinion may fairly, and no doubt does practically exist, in determining to what account they shall be carried. The classification, however, which is contained in the books, accords with our judgment, except in the following instances:

The interest account contains an item of..	\$1,807 58
Profit and loss, do.....	431 28
Amount .....	\$2,238 86

"Both of these items consist of discount allowed, for satisfactory reasons, upon the freight of coal, and should in our opinion be deducted from the gross receipts of transportation.

"Again, profit and loss is charged with \$10,000.

"This sum was allowed as discount upon the freight of coal brought down before November 30th, 1843, but, by reason of disagreement, not settled till the year following, when the claim was compromised by this allowance.

"Again profit and loss has an item of \$140 89, for freight and damage of merchandize transported by the company.

"Again profit and loss has an item of \$391 03, for freight on missing coal, which is coal that fails through some accident happening on the way, to reach Richmond, and is accounted for by the company. These charges also grew out of transactions antecedent to Nov. 30th, 1843, and belong to that year. The suspension of these claims until after the transportation account of 1843, to which they were properly chargeable, had been closed, is the reason why they were finally carried to profit and loss.

"Again profit and loss has an item of \$1,519 50, which sum was paid to the owners for the freight on missing coal. The freight bills are usually, as a matter of convenience, settled without reference to the missing coal, and the company reimburse the owners, both for the coal and the freight upon it.—The loss on the coal thus left on the way has uniformly been put down among the expenses of transportation. The freight upon it when refunded, should in our opinion be charged to a separate account, which would show its amount in any given period, and at the end of the year, or at other regular times, it should be merged in transportation account, thus reducing the gross profits of that account.

"Construction has an item of \$3,125 07, which in our opinion belongs more appropriately to transportation. The costs of suits at law are generally charged to interest account, which appeared to us to be an improper mode of entering them.

"Beyond these items we met with nothing, during the period in question, in the classification of the accounts, which merits comment."

The statements of the circular of March 10th are in accordance with the books.

To the question as to the correct statement and classification of the items of cost of transportation of coal in the report and circular—the committee reply,

"We examined the accounts of transportation which were found to be kept systematically, and in such minute detail as to afford all the data essential to the formation of a satisfactory opinion. The books of the engineer, so far as connected with this subject, were also examined, and were kept in a manner that met our approval."

They add that the object of that report appears to have been the statement of the bare expenses of transportation, that the cost so stated, 41 8-10th cents per ton. Adding the sums which the committee, as above mentioned, have transferred to transportation account—the corrected cost is 42 54-100 cents; and adding in the proportion of general expenses of the transportation chargeable on coal, the committee assert,

"The cost of transporting a ton of coal during the above period, including the proportion of all expenses properly chargeable upon coal is therefore 47 79-100 cents."

Specification III. requires the same examination of the accounts since Nov. 30, 1844, as far as made up—the quantity of coal carried, and the cost of transportation. The answer embraces a period of eight months, from Nov. 30th, 1844 to July 31st, 1845, including the winter season. The amount of coal brought down was 429,920 tons—the aggregate of expenses, determined in the manner adopted by the committee, \$192,724 15, or 44 83-100 cents per ton.

Specification IV. relates to the bond account of the company. The answer contains much information, but as it is mainly corroborative of the accounts of the company, we must refer to the published reports. Appended are several laboriously compiled tables, which present this information in detail. The following extract will show the nature of the charges which have been urged against the company.

"Whether any other, or more correct statement of such bonds had been prepared for the stockholders, which statement was suppressed with a view to deceive the stockholders or the public, and particularly parties, then in negotiation with the company."

"We met with no account of any such occurrence in the books or papers submitted to our inspection,

but a verbal explanation was made by some of the officers to this effect. The report was prepared in the usual way, and sent to the press, containing an account of the mortgages then executed, and to be held by certain trustees, for the benefit of such persons as might become the purchasers of the bonds intended to be secured by them. The statement contained the whole amount of bonds thus authorized to be issued, when in fact only a part of them had been negotiated. Under these circumstances it was feared that the true character of the statement would be misapprehended, and the debt be supposed to exceed its actual amount. This portion of the report was, therefore, stricken out, which neither changed the character, nor altered the amount of actual liabilities. The amount, as stated in the report, is correct, and we were further informed by the officers that no negotiation for a loan was pending at that time."

The following items of information are also given in answer. The amount of bonds paid from Nov. 30th, 1844, to Aug. 1st, 1845, is \$42,500. The amount negotiated during the same time, \$20,142. Charges and commission, do., \$1,160. The whole amount of bonds outstanding to August, \$6,619,200. The whole commission, charges and loss on these, \$1,494,046 89. Bonds pledged as collateral, \$1,443,800.

The answer to specification V. states that no reason whatever could be found to distrust the correctness of the weekly and monthly statements.

"Specification VI. 'What is dumpage? What the amount of the charge for dumpage in the year ending the 30th November, 1844? What has it been since that time? What has it averaged per ton during these periods respectively?'

"Dumpage is represented to be an allowance made to the consignee of coal when it is dropped upon a wharf at Richmond, instead of being delivered on board of a vessel, and is designed to compensate in part for the additional charges incurred under such circumstances in shipping it. It is thus dropped, when from any cause vessels are not ready to receive it, or the owner is not desirous to ship it, because the company cannot without serious interruption of their business, permit their cars to remain idle. To avoid this alternative, they have shared the necessary additional expense with the consignee. The amount paid for the year ending November, 1844, was \$26,416 64, and from that day to August 1st, 1845, \$21,724 76. The average per ton for the first period is 6 79-100 cents—for the second is 4 12-100 cents.

"The facts show that the allowance for dumpage was made on 40 per cent. of all the coal transported on the road for the eight months ending July 31st, and that its total amount causes a considerable drain upon the income of the company."

Specification VIII. answer, states that no bonus appears to have been paid at any time by the company to induce boatmen to run from Richmond.

The answer to specification IX. is of such importance, and conveys so much information, particularly in regard to the much disputed point—wear of rails—that we give it entire.

"The condition of the roadway, bridges and track generally of the road; whether they are kept in such good and proper order and repair, as on well managed roads generally; and the state of the several kinds of rail in use on the road, and their adequacy to sustain for the future the heavy trade now on the road."

"The road as we have remarked is ninety-four miles long, extending from Mount Carbon, near the sources of the Schuylkill, down the valley of that river, with a double track, and without any ascending grades to a point about six miles from the Delaware river, where the coal trade diverges, crossing from the west to the east bank of the river, and thence direct to tide water at Richmond above Philadelphia, while the track for passengers and other purposes is continued down the Schuylkill valley till it unites with a railway belonging to the state of Pennsylvania, called the Columbia or State road, which leads into the city of Philadelphia. The track designed exclusively for the coal trade has an

ascending grade between the Schuylkill and Delaware rivers, of 40 feet to the mile for 1 40-100 miles, and on this part of the road the coal trains are aided by an additional heavy engine. The road connects upon the bank of the Delaware with thirteen commodious wharves projecting from the bank into the river with ample docks between, and so arranged as to accommodate in a safe and convenient manner, a large number of vessels. When a loaded train arrives, the cars are run upon any of the wharves which suit convenience, and the bottoms being so constructed as to open at pleasure, the load of any one is carried almost instantly by a chute into the hold of the vessel designed to receive it. For despatch and economy of labor the arrangements for unloading the cars, and loading the vessels can scarcely be surpassed.

"As the road penetrates the region of coal branches, which are the property of others, diverge from it, and connect with the important points where mining operations are carried on. The cars are taken up these lateral tracks, and return to the points where the trains are arranged and despatched for tide water.

"These brief explanatory remarks will make the extent of the work and its general adaptation to the purposes for which it is designed, by a connection at one terminus with the mines, and at the other with navigable water and the city of Philadelphia sufficiently obvious. We will, therefore, without further comment, proceed to reply to the proposed inquiries.

"We passed up and down the road, saw the operations of business, inspected the principal stations and workshops, examined and compared the different qualities of rail, and the effect produced upon the rail and particularly upon the curves by the action of the trains at many points, noticing, as we passed, the general appearance and condition of the work. Our observations upon many parts were necessarily hurried, but upon others, time was taken for a more deliberate and careful examination.

"The road bed is well formed, neatly finished, judiciously prepared for the superstructure, and the system of drainage is well arranged and well executed.

"Such of the bridges as required it, have been suitably strengthened, and appear to sustain with firmness the heavy trains, loaded with from four to five hundred tons of coal, and are well protected against incendiaries by watchmen.

"The track both in line and surface is superior to the roads generally in the middle states, and compares favorably with those in the eastern states.

"The rails are united in an approved manner, the joints being well made, and the cross ties are of sufficient dimensions and generally sound.

"The form of the rail is uniformly H but varies in weight and proportions in different parts of the track. From the foot of the inclined plane, on the Columbia railroad to Reading, the weight of the rail is 45 lbs. to the yard, and 52 lbs. to the yard upon the residue of the route. The outer rail of some of the curves, as might be anticipated, is considerably worn by the flange of the wheels, and we noticed occasionally, rails, the caps of which had spread, but saw no such evidence of wear, as led us to believe that extensive renewals will be required for a long time to come.

"We noticed one mile of this track laid with the lightest rail which, owing to circumstances connected with the preparation of the road bed for the second track had been used more than any other part. The fact that more than 1,300,000 gross tons had passed safely over it, induced us to bestow upon it great attention, and to note with exactness its present condition and probable capacity for future service. The rails upon the straight part were in a sound condition, and disclosed no visible indications of any inferiority to the rest of the track. Those upon the outer line of the curves were considerably worn, but they had neither failed nor given any indications of failure, and though their strength is of course somewhat impaired by the wear, we entertain the belief that with ordinary repairs they will continue to do good service for years.

"In speaking of this track our object is to present its leading characteristics, and having done so, we will barely repeat that in our judgment its condition is quite satisfactory.

"The new track, with the exception of ten miles,





her merchants to anticipate a contrary result. Let them then turn their eyes to this route.—They will then perceive that they have a deep interest in the completion, at as early a period as possible, of the North Branch canal. The legislature of New York, I am informed, have consented to the connection of this work with the improvements of that state, which will complete the chain of communication with the lakes and the whole west.

#### WELLS' FALLS.

#### St. Lawrence and Atlantic Railroad.

"Letters from Montreal," says the Portland Advertiser of 28th April, "bring information of the choice of directors of the St. Lawrence and Atlantic railroad company on the 15th. The following are the names of the gentlemen chosen:

Hon. George Moffatt,	Wm. Molson, Esq.
" A. N. Morrin,	John Young, Esq.,
" Peter McGill,	of Montreal.
" Thos. A. Stayner,	A. T. Galt, Esq. and
John Torrance, Esq.	Samuel Brooks, Esq.,
John Frothingham, Esq.	of Sherbrooke.
Thomas Cringan, Esq.	Wilder Pierce, Esq.,
George Desbarats, Esq.	of Stanstead.

"The board is a very strong and influential one. A greater interest was manifested than was ever before witnessed, and all were desirous of seeing the work go forward. Great unanimity and harmony prevailed.

"A. C. Morton has been appointed principal superintending engineer of the whole line, by the joint action of both boards. Engineering parties are organized, and in a month or two, 30 miles of the line from Montreal will be ready for contract."

We are gratified to learn that this work is to be commenced and pushed forward with spirit.

#### Iron Region of the West.

The Maysville (Ky.) Eagle furnishes the following statement in relation to the manufacture of iron in that immediate region. There are few people at a distance who have any idea of the extent of the manufacture of iron in that region; and there are other sections of country where an equal amount of iron is made, of which as little is known. We are obliged to the editor of the Eagle for this list of furnaces, and should have been still more so if he had given their location more definitely—their postoffice for instance.

"The present tariff has operated very favorably in the revival and heavy increase of the iron business all over the union. There are now six furnaces in Greenup county, in this state, and seventeen in the three adjoining counties of Scioto, Lawrence and Jackson, in Ohio, all profitably engaged. Nearly, or quite one-half of these were compelled to suspend operations in consequence of the low price of iron, several years since. A glance at the following table, which we find in the last Portsmouth Tribune, will show how intimately connected with those of the whole state of Pennsylvania are the interests of those sections of Ohio and Kentucky in the preservation of a reasonable tariff upon foreign iron. If twelve thousand persons, in less than four counties, are directly and as many more indirectly, dependent upon the iron business for the necessities of life, what an immense interest is at stake, when reckless politicians are not content with a tariff whose minutest workings have been felt beneficially upon the business of the country. The great amount of capital invested, the growing competition, and the steady demand at a fair living profit for all that can be manufactured, has revived business. No country is so rich in mineral resources as our own, and we cannot too greatly encourage every enterprise that develops them, and contributes so powerfully to swell the national wealth.

#### BLAST FURNACES IN SCIOTO AND LAWRENCE COUNTIES, OHIO.

Names of Furnaces.	Names of Owners.	Will make this year tons of pig iron.	Heat.
Franklin.....	Gould, Hurd & Co.....	1600.....	hot.
Junior.....	J. W. & D. A. Glidden.....	2000.....	"
Scioto.....	Vorhes & Mansur.....	1800.....	h. & c.
Bloom.....	James Murfin & Co.....	1500.....	hot.
Clinton.....	Gaylord & Co.....	1500.....	cold.
Buckhorn.....	Willard, James & Co.....	1800.....	hot.
Mt. Vernon.....	Campbell, Ellison & Co.....	1850.....	"
Lawrence.....	Culbertson, Means & Co.....	1900.....	"
Center.....	Hamilton, Shiras & Co.....	1600.....	"
Etna.....	Dempsey, Rogers & Co.....	1500.....	cold.
Vesuvius.....	W. A. McClurg.....	1500.....	hot.
La Grange.....	W. A. McClurg.....	1500.....	"
Hecla.....	Henry Blake.....	1700.....	cold.
Pine Grove.....	R. Hamilton.....	1800.....	hot.
Union.....	Sinton & Means.....	1500.....	"
Ohio.....	Sinton & Means.....	1800.....	"

Jackson County, Ohio.			
Jackson.....	Hanna, Ellison & Co.....	1500.....	"
Greenup County, Ky.			
Raccoon.....	A. Cole & Co.....	1500.....	cold.
Amanda.....	A. Paul.....	1500.....	"
Belleville.....	L. Pogue.....	1600.....	"
Clinton.....	Wm. Patterson.....	1500.....	"
Pennsylvania.....	Wurtz & Brother.....	1500.....	"
Greenup.....	Campbell & Willard.....	1500.....	"

Making, tons..... 37,450, which at \$30 per ton, the current market price, amounts to \$1,123,500.

Each furnace employs on an average.....	hands.....	100
And sustains.....	persons.....	400
Consumes Flour.....	bbls.....	360
Corn meal.....	bushels.....	1,000
Corn.....	".....	10,000
Bacon.....	pounds.....	50,000
Beef.....	".....	20,000
Potatoes.....	bushels.....	1,500

Besides other provisions, and teas, sugar and coffee in proportion.

Distances from Oahu, Sandwich Islands.—A correspondent of the Polynesian gives the following memorandum of distances:

	Degrees.	Eng. miles.
From Oahu to Panama.....	76	5,282
" " Tahiti.....	40	2,780
" " Port Jackson.....	63	5,073
" " Columbia river.....	36	2,502
" " Kamschatka.....	44½	3,092½
" " Valparaiso.....	97	6,749½
" " Lima.....	85½	5,942½
" " Canton.....	80	5,560
" Canton to Boston, per Cape Good Hope.....	217	15,081½
" Boston to Oahu, per Cape Horn.....	217	15,081½
" Oahu to Canton, Boston and back.....	514	35,723
" Oahu to New York, per Panama.....	108	7,506
" Oahu to New York, per S. Blas.....	88	6,116
" Oahu to Lands' End, per Panama.....	147	10,216½

Western Railroad Receipts.—Comparative statement of receipts on the Western railroad for three months ending March 31st, 1845 and 1846, viz:

	1846.	1846.	Increase.
Passengers.....	\$60,825 01	\$76,346 77	\$15,521 76
Freight.....	79,053 72	99,726 58	20,672 86
Othersources.....	5,670 33	6,554 34	884 01

\$145,579 06 \$182,637 69 \$37,058 63  
Total increase in 3 months.....\$37,058 63

Comparative statement of the business on the Philadelphia and Reading railway during the third week in April, for three years, viz:

	1844.	1845.	1846.
Travel.....	\$1,767 91	\$2,230 67	\$2,998 32
Freight on goods.....	1,124 94	2,158 29	3,303 98
Do. do. coal.....	7,492 08	10,629 19	27,817 79
	\$10,384 93	\$15,018 15	\$34,620 09
Coal trans., tons.....	7,646	10,872	22,421

Eric Railroad.—The earnings of the eastern division of the Erie railroad for the month of April, 1846, were as follows:

From freight.....	\$10,033 41
" Passengers and mails.....	5,381 59

Total.....\$15,415 00  
Same time last year.....13,105 18

Increase.....\$2,311 82

On the 1st of April, the rates of fare were reduced 30 per cent.; still, the receipts from passengers were \$921 30 (or more than 20 per cent.) greater than they were in the same month last year.

Yet, with results so encouraging, and prospects so fair, a bill to ensure the early construction of the road has been lost!

Business of the Madison and Indianapolis railroad.—The following account of the business of the railroad during the week ending April 18, 1846, is from the Indianapolis Sentinel of 23d April.

Outward.		Inward.	
257 passengers,	213 passengers,	213 passengers,	213 passengers,
163,000 lbs. merchandise,	716 bbls. flour,	716 bbls. flour,	716 bbls. flour,
24 bbls. salt,	2,055 bush. wheat,	2,055 bush. wheat,	2,055 bush. wheat,
45 bbls. whiskey,	731 bush. corn,	731 bush. corn,	731 bush. corn,
16 bbls. molasses,	30,000 feet lumber,	30,000 feet lumber,	30,000 feet lumber,
10 bbls. tar and oil,	10,000 staves,	10,000 staves,	10,000 staves,
10 hf. bbls. beer,	20 cords wood,	20 cords wood,	20 cords wood,
250 bush coal,	21,000 lbs. other freight,	21,000 lbs. other freight,	21,000 lbs. other freight,
6 kegs powder,			
10 ploughs,			
Flour, 3.75. Wheat, 66.			
	Yours,	W. N. J.	

#### Railroad Passenger Trains Leaving Boston Daily, Except Sundays.

We copy the annexed list of departures from Boston by railroad and steamboat, from the Traveller. It will be found exceedingly useful to travellers: and interesting to many, who like to know how such matters progress, even though they do not travel much. For the convenience of our readers we shall keep it standing, and endeavor to correct it as changes are made.

PASSENGER TRAINS LEAVE BOSTON DAILY.			
For	Depot.	Hours.	
Albany.....	Worcester.....	7½ a.m.,	7½ p.m.
Andover.....	Me. Extension.....	7½, 11½ a.m.,	2½, 4½, 6 p.m.
Concord, Ms.....	Charlestown.....	7 a.m.,	1½ p.m.
Concord, Nh.....	Lowell.....	7, 11 a.m.,	5½ p.m.
Dedham.....	Providence.....	8 a.m., 12½, 3½, 6½ p.m.	
Dover.....	Me. Extension.....	7½ a.m., 2½, 4½ p.m.	
Fitchburg.....	Charlestown.....	7 a.m., 1½, 5 p.m.	
Fresh Pond.....	".....	6, 10 a.m., 1½, 4½ p.m.	
Fall River.....	Providence.....	8½ a.m., 3½ p.m.	
Hartford.....	Worcester.....	7½ a.m., 4 p.m.	
Haverhill.....	Me. Extension.....	7½, 11½ a.m., 2½, 4½, 6 p.m.	
Lowell.....	Lowell.....	7, 9, 11 a.m., 2½, 5½ p.m.	
Millbury.....	Worcester.....	7½ a.m., 4 p.m.	
Nashua.....	Lowell.....	7, 11 a.m., 5½ p.m.	
Newburyport.....	Eastern.....	7½, 11½ a.m., 2½, 5½ p.m.	
New Bedford.....	Providence.....	7½ a.m., 4½ p.m.	
New Haven.....	Worcester.....	7½ a.m., 4 p.m.	
Newton.....	".....	7½, 9½, a.m., 1½, 2½, 4½, 6½, 8½ p.m.	
Norwich.....	".....	7½, 8½, a.m., 5 p.m.	
Plymouth.....	Old Colony.....	7½ a.m., 5 p.m.	
Portland.....	Eastern.....	7½ a.m., 2½ p.m.	
".....	Me. Extension.....	7½ a.m., 2½ p.m.	
Portsmouth.....	Eastern.....	7½ a.m., 2½, 5½ p.m.	
Providence.....	Providence.....	7½ a.m., 4 and 5 p.m.	
Reading.....	Me. Extension.....	7½, 9, 11½ a.m., 2½, 4½, 6½, 8½ p.m.	
Salem.....	Eastern.....	7½, 9, 11½ a.m., 1½, 2½, 3½, 5½, 6½, 8½ p.m.	
Somerset.....	".....	7½ a.m., 2½ p.m.	
".....	Me. Extension.....	7½ a.m., 2½, 4½ p.m.	
S. Braintree.....	Old Colony.....	7½, 10½ a.m., 2½, 5, 7 p.m.	
Springfield.....	Worcester.....	7½ a.m., 4 p.m.	
Stoughton.....	Providence.....	11½ a.m., 5½ p.m.	
Taunton.....	".....	7½ a.m., 4½ p.m.	
Worcester.....	Worcester.....	7½ a.m., 1½, 4½ p.m.	
Waltham.....	Charlestown.....	7, 10 a.m., 1½, 2½, 5, 5½, 55 p.m.	
Woburn.....	Lowell.....	8, 11½ a.m., 3, 6 p.m.	



**THE WESTERN AND ATLANTIC** Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,  
Chief Engineer.

Atlanta, Georgia, April 16th, 1846.

17

**RAILROAD IRON—500 TONST RAILS**  
—60 lbs. to the yard. Depth of rail, 3½ inches; width of base 4 inches; width of top, 2½ inches; length of bars 15 and 17½ feet. Apply to,

A Steam Pile Driver—built by "Dunham & Co."—in complete order; has never been used, and for sale a bargain. Cost originally \$5,000. Also 12 Railway Passenger Cars, that have never been used, which will be sold a bargain.

DAVIS BROOKS & CO.,  
39 Wall street

April 11.

**TO LOCOMOTIVE AND MARINE ENGINE** Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufacture and for sale by

MORRIS, TASKER & MORRIS,

Waterhouse S. E. corner 3d and Walnut Sts., Philadelphia.

11f

**LAWRENCE'S ROSENDALE HYDRAULIC** Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by

JOHN W. LAWRENCE,

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office.

32 1f

**A. & G. RALSTON & CO., NO. 4**  
A. South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz: 180 tons 2½ x 1 inch Flat Punched Rails, 20 ft. long. 25 " 2½ x 1 " Flange Iron Rails. 75 " 1 x 1 " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures.

11f

**SPRING STEEL FOR LOCOMOTIVES,** Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 14 to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,  
Albany Iron and Nail Works,

**LEXINGTON AND OHIO RAILROAD.**  
Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9, from Frankfort, other hours as above.

**STEPHENS' RULING AND MECHANICAL** Drawing Ink, for Engineers, Artists and Designers. This article will be found superior to the best Indian Ink for the above purposes. It does not smear with India rubber or wash off with water. It flows freely from the drawing pen, and never corrodes or encrusts it. It may be used on a plate or slab, with a camel's hair brush, diluting it with water, or thickening it by drying, as required. It has the advantage of being ready for immediate use.

Sold in conical-shaped bottles, convenient for using from, without any stand, at 15 cents each.

ALSO,

**STEPHEN'S WRITING FLUIDS.**

These compositions, which have so remarkably extended the use of the STEEL PEN, are brought to great perfection, being more easy to write with, more durable, and in every respect preferable to the ordinary ink. In warm climates they have become essential.

They consist of a Blue Fluid, changing into an intense Black color.

A Patent Unchangeable Blue Fluid, remaining a deep Blue color.

A Superior Blue Ink of the common character, but more fluid.

A brilliant Carmine Red, for Contrast Writing.

A Carbonaceous Record Ink, which writes instantly black, and being proof against Chemical Agents, is most valuable in the prevention of frauds.

Also, a new kind of MARKING INK for Linen and Inkstands adapted for, preserving Ink from evaporation and dust.

Sold in Bottles of various sizes, by all Stationers and Booksellers.

Be sure to ask for Stephens' Writing Fluid.

N. B.—These unchangeable Blue Fluids are Patent Articles; the public are therefore cautioned against imitations, which are infringements, to sell or use which is illegal.

Stephens' Select Steel Pens.

The utmost possible care having been bestowed upon the manufacture of these articles, so as to procure the highest finish, they can be confidently recommended, both for flexibility and durability.

All the above articles are prepared by Henry Stephens, the inventor, No. 54 Stamford-street, Blackfriars road, London, and sold by Booksellers and Stationers in bottles of various sizes, and may be had wholesale from the agents in Boston, New York, Philadelphia, Baltimore, Washington, Charleston, New Orleans, and St. Louis.

Wm. W. Rose, Wall-street, New York, is my general agent in the United States.

**VALUABLE PROPERTY ON THE MILL** Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 ft. with lathes, work benches, Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, turnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x46½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & CO., Philadelphia.

ja45



**RICH & CO'S IMPROVED** PATENT SALAMANDER SAFES.—Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

TEST No. 10.

Certificate from Mr. Silas C. Field, of Vicksburgh, Mississippi.

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited.

S. C. FIELD.

Vicksburgh, Miss., March 9th, 1846.

Certificate from Judge Battaille, of Benton, Mississippi.

In October last I purchased one of Rich's Improved Salamander Safes, which was in the fire at the burning of my law office, and several adjoining buildings in this place, on the 17th of November last, at about half-past one o'clock A. M. of that day. The building was entirely consumed; and I take pleasure in stating that my papers in said safe were preserved without injury. A receipt book which was in said safe, had the glue drawn out of its leather back by the heat, and the back broken; but the leaves of the book, and the writing thereon, were entirely uninjured; and some of the writing which was of blue ink, was also left wholly uneffaced and not in the least faded. Said safe was by the fire heated perfectly red hot, and I do not hesitate to say, that said safe is a perfect security against fire. But the safe tumbled over during the fire, and being heated red hot, the outer sheeting of the door became pressed in, and the bolts of the lock bent, so that it could not be unlocked, and I had to have it broken open.

JOHN BATTLE.

Benton, Miss., December 27, 1845.

Still other Tests in the Great Fire of July 19, 1845.

The undersigned purchased of A. S. Marvin, No. 138½ Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was parched by the extreme heat.

(Signed.)

RICHARD & CRONKHITE.

New York, 21st July, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138½ Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards.

(Signed.)

WM. BLOODGOOD.

New York, 21st July, 1845.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from \$50 to \$500 each. For sale by

A. S. MARVIN, General Agent,  
138½ Water st., N. Y.

Also by Isaac Bridge, 76 Magazine street, New Orleans.

Also by Lewis M. Hatch, 120 Meeting street, Charleston, S. C.

16 1f

**BOSTON AND ALBANY.—WESTERN RAILROAD.—Fare Reduced.**

1846. Spring Arrangement. 1846.  
Commencing April 1st.

Passenger trains leave daily, Sundays excepted—  
Boston 7½ p. m. and 4 p. m. for Albany.  
Albany 6½ " and 2½ " for Boston.  
Springfield 7 " and 1 " for Albany.  
Springfield 7 " and 1½ " for Boston.

Boston, Albany and Troy:

Leave Boston at 7½ a. m., arrive at Springfield at 12 m., dine, leave at 1 p. m., and reach Albany at 6½ p. m.

Leave Boston at 4 p. m., arrive at Springfield at 8 p. m., lodge, leave next morning at 7, and arrive at Albany at 12½ m.

Leave Albany at 6½ a. m., arrive at Springfield at 1 m., dine, leave at 1½ p. m., and arrive at Boston 6½ p. m.

Leave Albany at 2½ p. m., arrive at Springfield at 8½ p. m., lodge, leave next morning at 7, and arrive at Boston at 12 m.

The trains of the Troy and Greenbush railroad connect with all the above trains at Greenbush.

Fare from Boston to Albany, \$5; fare from Springfield to Boston or Albany, \$3 75.

Boston and New York, via Springfield: Passengers leaving Boston at 4 p. m., arrive in Springfield at 8 p. m., proceed directly to Hartford and New Haven, and thence by steamers to New York, arriving at 6 o'clock a. m.

For Buffalo: the trains for Buffalo leave Albany at 7½ a. m. and 7 p. m., arriving at Buffalo at 8 a. m. and 8 p. m. next day. Returning, arrive at Albany at 4 a. m. and 4 p. m.

New York and Boston, via Albany: the trains from Boston arrive at Albany in season for the 7 o'clock boats to New York. Returning, the boats, leaving New York at 5 and 7 p. m., reach Albany at 5 a. m., in ample season for the morning trains to Boston.—Steamboats also leave Albany at 7 a. m. and 5 p. m. and stop at the usual landing places upon the river.

The trains of the Springfield, Hartford and New Haven railroad, connect at Springfield, and passengers from Albany or Boston proceed directly on to Hartford and New Haven.

Montreal: through tickets to Montreal may be obtained in Boston, by which passengers may proceed to Troy, and thence by stage via Chester, Elizabeth, etc., and in the season of navigation by canal to Whitehall, and thence by the splendid steamers of Lake Champlain to St. John, via Burlington, and thence by railroad and steamers to Montreal.

The trains of the Hudson and Berkshire railroad connect at Chatham and State Line.

The Housatonic railroad connects at State Line.

The trains of the Connecticut River railroad connect at Springfield, and passengers may proceed without delay to Northampton, and thence by stage to Greenfield, Brattleboro, Bellows Falls, Hanover, Haverhill, etc.

Stages leave West Brookfield for Ware, Endfield, New Baintree and Hardwick; also leave Palmer for Three Rivers, Belchertown, Amherst, Ware and Monson; Pittsfield for North and South Adams, Williamstown, Lebanon Springs, etc.

Merchandise trains run daily (Sundays excepted) between Boston, Albany, Troy, Hudson, Northampton, Hartford, etc.

For further information apply to C. A. Read, agent, 27 State street, Boston, or to S. Witt, agent, Albany.

JAMES BARNES,

Superintendent and Engineer.

Western Railroad Office,

Springfield, April 1, 1846.

14 1y

**MANUFACTURE OF PATENT WIRE**  
Ropes and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by  
JOHN A. ROEBLING, Civil Engineer,  
Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition.

2v19 1y

**BACK VOLUMES OF THE RAILROAD JOURNAL** for sale at the office, No. 23 Chambers street,

**RAILROAD IRON.**—The subscriber having taken contracts for all the Railroad Iron he can manufacture at his Iron Works at Trenton, until July next, will gladly receive orders for any quantity to be delivered after that time, not exceeding thirty tons per day. Also has on hand and will make to order Bar Iron, Braziers' Rods, Wire Rods and Iron Wires of all sizes, warranted of the best quality. Also manufactures and has on hand Refined American Isinglass, warranted equal in strength to the Russian. Also on hand a constant supply of Glue, Neats' Oil, &c. &c.

PETER COOPER, 17 Burling Slip.

New York, January 23d, 1846. 1y 10

C. J. F. BINNEY,

GENERAL COMMISSION MERCHANT  
and Agent for Coal, and also Iron Manufactures, etc.

No. 1 CITY WHARF, Boston.

Advances made on Consignments.

Refer to Amos Binney, Boston.

Grant & Stone,

Brown, Earl & Erringer, } Philadelphia.

Weld & Seaver, Baltimore.

December 8, 1845.

1m 50

**SCRIBNER'S ENGINEERS' AND MECHANICS' Companion.** For sale at this office. Price \$1.50.

**LARD OIL FOR MACHINERY, ETC.**

Winter pressed, cleansed from gum, and manufactured expressly for engines and machinery of all kinds, railroads, steamboats, woollen and other manufactures, and for burning in any lamp without clogging the wick. Engineers of railroads and others who have used this oil, and to whom reference can be made, give it preference over the best sperm for its durability, and not requiring to be cleaned off like that, and costing about two-thirds the price. For sale by the barrel, and samples can be sent for trial, by addressing

C. J. F. BINNEY,

Agent for the Manufacturer,  
Boston, Mass.

11 eop 1m

ENGINEERS' AND SURVEYERS'  
INSTRUMENTS MADE BY  
EDMUND DRAPER,

Surviving partner of

STANCLIFFE & DRAPER.



No 23 Pear street,  
near Third,

below Walnut,  
Philadelphia.

**KITE'S PATENT SAFETY BEAM.**

**M**ESSRS. EDITORS.—As your Journal is devoted to the benefit of the public in general I feel desirous to communicate to you for publication the following circumstance of no inconsiderable importance, which occurred some few days since on the Philadelphia, Wilmington and Baltimore railroad.

On the passage of the evening train of cars from Philadelphia to this city, an axle of our large 8 wheel passenger car was broken, but from the particular plan of the construction, the accident was entirely unknown to any of the passengers, or, in fact, to the conductor himself, until the train, (as was supposed from some circumstances attending the case,) had passed several miles in advance of the place where the accident occurred, whereas had the car been constructed on the common plan the same kind of accident would unavoidably have much injured it, perhaps thrown the whole train off the track, and seriously injured, if not killed many of the passengers.

Wilmington, Del., Sept. 23, 1840.

The undersigned takes pleasure in attesting to the value of Mr. Joseph S. Kite's invention of the Safety Beam Axle and Hub for railroad cars. They have for some time been applied to passenger cars on this road, and experience has tested that they fully accomplish the object intended. Several instances of the fracture of axles have occurred, and in such the cars have uniformly run the whole distance with entire safety. Had not this invention been used, serious accidents must have occurred.

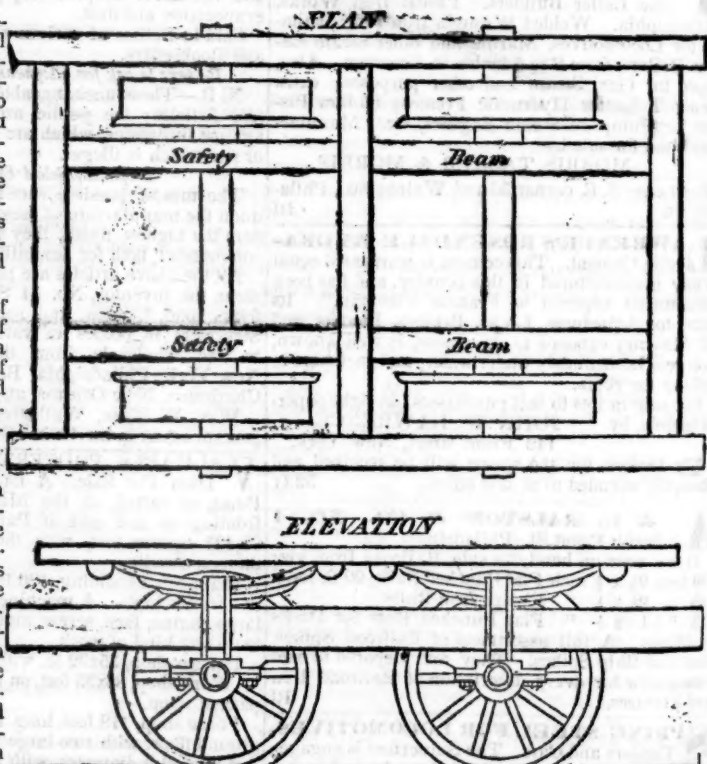
In short, we consider Mr. Kite's invention as completely successful in securing the safety of property and lives in railroad travelling, and should be used on all railroads in the country.

JOHN FRAZER, Agent,

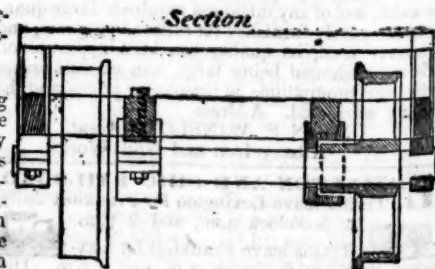
GEORGE CRAIG, Superintendent,

A model of the above improvement is to be seen at the New Jersey railroad and transportation office, No. 1 Hanover st., N. York.

JAMES ELLIOTT, Sup. Motive Power,  
W. L. ASHMEAD, Agent.



ELEVATION



Section



**PATENT HAMMERED RAILROAD, SHIP and Boat Spikes.** The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.  
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co., Boston. ja45

**PATENT RAILROAD, SHIP AND BOAT Spikes.** The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, Agent.  
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

\*\*\* Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45

## FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

**TO THOSE INTERESTED IN** Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

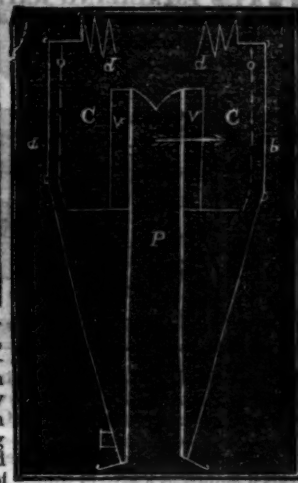
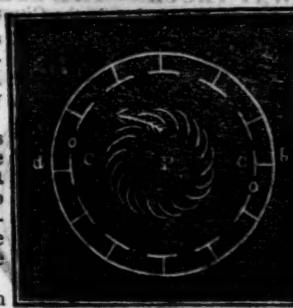
E. A. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburg and Jackson Railroad, Vicksburg, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. McKee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad-Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckley & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

\*\*\* The letters in the figures refer to the article given in the Journal of June, 1844. ja45

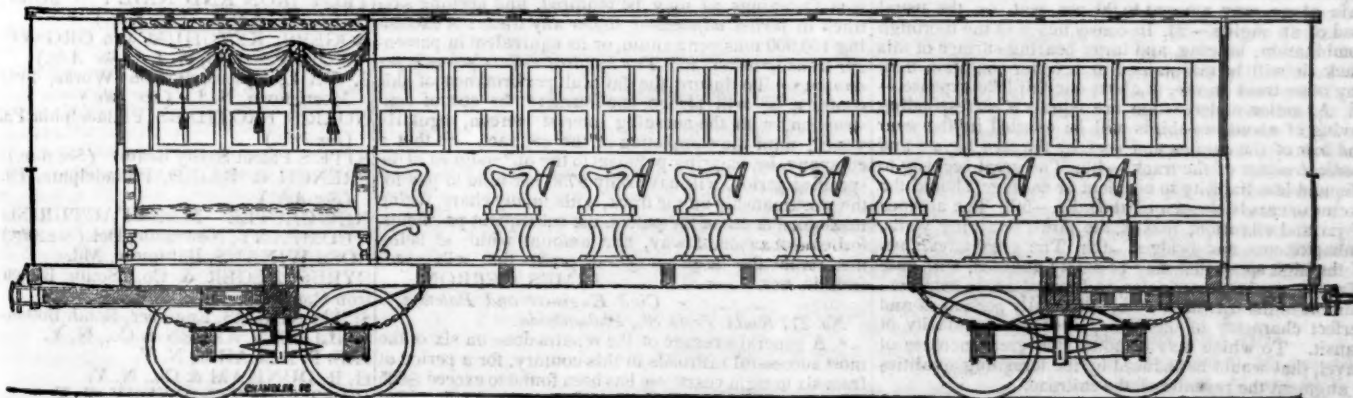


**BENTLEY'S PATENT TUBULAR STEAM BOILER.** The above named Boiler is similar in principle to the Locomotive boilers in use on our Railroads. This particular method was invented by Charles W. Bentley, of Baltimore, Md., who has obtained a patent for the same from the Patent Office of the United States, under date of September 1st, 1843—and they are now already in successful operation in several of our larger Hotels and Public Institutions, Colleges, Alms Houses, Hospitals and Prisons, for cooking, washing, etc.; for Bath houses, Hatters, Silk, Cotton and Woollen Dyers, Morocco dressers, Soap boilers, Tallow chandlers, Pork butchers, Glue makers, Sugar refiners, Farmers, Distillers, Cotton and Woollen mills, Warming Buildings, and for Propelling Power, etc., etc.; and thus far have given the most entire satisfaction, may be had of D. K. MINOR, 23 Chambers St., New York.

The article is complete in itself, occupies but little space, is perfectly portable, and requires no brick work, not even to stand upon. It is valuable not only in the saving of time and labor, but in the economy of fuel, as it has been ascertained by accurate measurement, that the saving in that article is fully two-thirds over other methods heretofore in use. They are now for the first time introduced into New York and Boston by the subscriber, who has the exclusive right for the New England states, New York and New Jersey, and are manufactured by

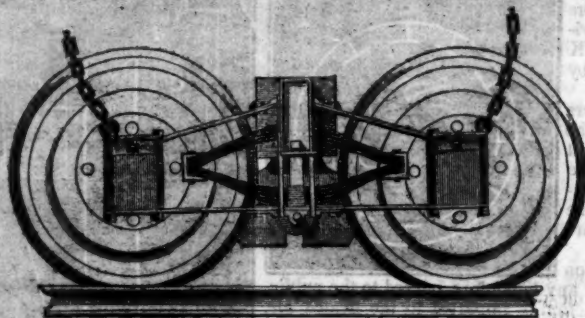
CURTIS & RANDALL, Boston; and by  
FORCE, GREEN & CO. New York.

## DAVENPORT & BRIDGES' CAR WORKS.



DAVENPORT & BRIDGES CONTINUE TO MANUFACTURE TO ORDER, AT THEIR WORKS, IN CAMBRIDGEPORT, MASS. Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country. Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.

# RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846.

W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed,]

WILLIAM ROE, Supt of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845.

[Signed,] G. A. NICOLL,

Supt Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed,] T. L. SMITH,

Jersey City, November 4, 1845.

N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car. For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

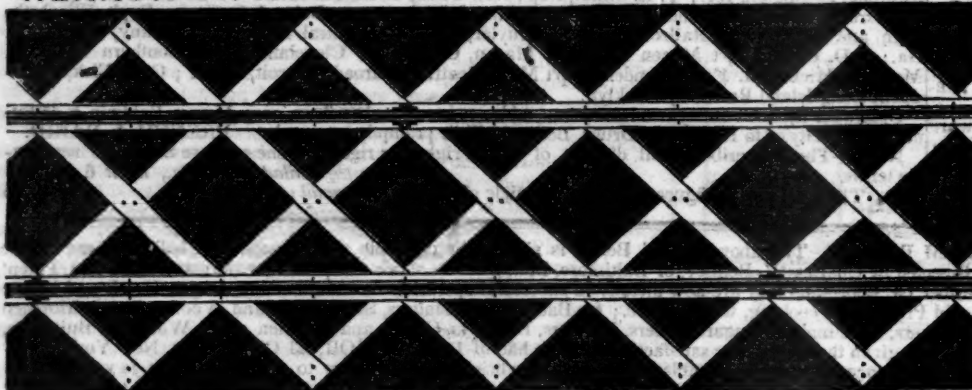
Long Island Railroad Depot,

[Signed,] JOHN LEACH,

Jamaica November 12, 1845.

Supt Motive Power.

## HERRON'S PATENT AMERICAN RAILWAY TRACK,



As seen stripped of the top ballasting

**HERRON'S IMPROVEMENTS IN RAILWAY** Superstructure effect a large aggregate saving in the working expenses, and maintenance of railways, compared with the best tracks in use. This saving is effected—1st, Directly by the amount of the increased load that will be hauled by a locomotive, owing to the superior evenness of surface, of line and of joint. This gain alone may amount to 20 per cent. on the usual load of an engine.—2d, In consequence of the thorough combination, bracing, and large bearing surface of this track, it will be maintained in a better condition than any other track in use, at about one-third the expense.—3d, As action and reaction are equal, a corresponding saving of about two-thirds will be effected in the wear and tear of the engines and cars, by the even surface and elastic structure of the track.—4th, The great security to life, and less liability to accident or damage, should the engine or cars be thrown off the rails.—5th, The absence of jar and vibration, that shake down retaining walls, embankments and bridges.—6th, The great advantage of the high speed that may be safely attained, with ease of motion, reduction of noise, and consequently increased comfort to the traveller.—7th, The really permanent and perfect character of the Way, insuring regularity of transit. To which may be added the great increase of travel, that would be induced by the foregoing qualities to augment the revenue of the railroad.

The cost of the Patent track will depend on the quantity and cost of iron and other materials; but it will not exceed, even including the preservation of the timber, the average cost of the tracks on our principal railroads. Generally, the timber structure, fastenings and workmanship, exclusive of the cost of the iron rails; will be from \$2,300 to \$4,000 per mile. On this structure, rails of from 40 to 50 lbs. per yard, will be equal in effect to

60 and 70 lbs. rails laid in the usual way. The proprietors of a road, furnishing approved materials in the first instance, the undersigned will construct the track on his plan in the most perfect manner, with recent improvements, for one thousand dollars per mile. And he will further contract to maintain said track for the period of ten years, furnishing such preserved timber and iron fastenings as may be required, and keeping said track in perfect adjustment, under any trade not exceeding 100,000 tons per annum, or its equivalent in passenger transportation, for Two hundred dollars per mile per annum. To insure the faithful performance of this contract, he will pledge one-fourth of the cost of construction, with the accruing interest thereon, regularly vested, until the completion of the contract. So that a company, by securing payment to the undersigned at the specified period, will have only \$750 per mile to pay for the workmanship on the track, without any charge being made for the use of the patent, the subsequent payments, for maintenance of way, and amount withheld, being made from the large margin of profits that will result from its use.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia.

\* A general average of the repairs done on six of the most successful railroads in this country, for a period of from six to eight years' use has been found to exceed \$625 per mile per annum, exclusive of renewal of rails. But few roads in this country carry as much as 100,000 tons per annum. When a road exceeds that quantity, the repairs due to the additional tonnage, up to 200,000 tons, will be charged at one mill per ton; over the latter, and not exceeding 300,000 tons, nine-tenths of a mill, etc. Where there are two tracks to maintain, a large reduction upon those rates will be made.

**THE AMERICAN RAILROAD JOURNAL** is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

### RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum...	5 00

### ENGINEERS and MACHINISTS.

J. F. WINSLOW, Albany Iron and Nail Works, Troy, N. Y. (See Adv.)  
TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)  
ROGERS, KETCHUM and GROSVENOR, Patterson, N. J. (See Adv.)  
3. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)  
NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)  
KITE'S Patent Safety Beam. (See Adv.)  
FRENCH & BAIRD, Philadelphia, Pa. (See Adv.)  
NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)  
ROSS WINANS, Baltimore, Md.  
CYRUS ALGER & Co., South Boston Iron Company.  
SETH ADAMS, Engineer, South Boston.  
STILLMAN, ALLEN & Co., N. Y.  
JAS. P. ALLAIRE, N. Y.  
H. R. DUNHAM & Co., N. Y.  
WEST POINT FOUNDRY, N. Y.  
PHENIX FOUNDRY, N. Y.  
ANDREW MENEELY, West Troy.  
JOHN F. STARR, Philadelphia, Pa.  
MERRICK & TOWNE, do.  
HINCKLEY & DRURY, Boston.  
C. C. ALGER, Stockbridge Iron Works, Stockbridge, Mass.